

Page 1

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE NORTHERN DISTRICT OF GEORGIA
3 GAINESVILLE DIVISION
4

5 CASE NUMBER: 2:22-CV-017-RWS
6

7 SANTANA BRYSON, et al.,

8 Plaintiffs,

9 vs.

10 ROUGH COUNTRY, LLC,

11 Defendant.
12

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15

16 THE ORAL PROCEEDINGS
17 OF THE DEPOSITION OF G. BRYANT BUCHNER
18 JULY 11, 2024
19
20

21 REPORTER: Paul Morse
22 Certified Court Reporter
23 and Notary Public

Bryson, Santana and Joshua v. Rough Country, LLC

<p style="text-align: right;">Page 2</p> <p>1 IT IS FURTHER STIPULATED AND AGREED</p> <p>2 that the signature to and the reading of the</p> <p>3 deposition by the witness is not waived, the</p> <p>4 deposition to have the same force and effect as</p> <p>5 if full compliance had been had with all laws</p> <p>6 and rules of Court relating to the taking of</p> <p>7 depositions.</p> <p>8 IT IS FURTHER STIPULATED AND AGREED</p> <p>9 that it shall not be necessary for any</p> <p>10 objections to be made by counsel to any</p> <p>11 questions except as to form or leading</p> <p>12 questions, and that counsel for the parties may</p> <p>13 make objections and assign grounds at the time</p> <p>14 of the trial, or at the time said deposition is</p> <p>15 offered in evidence, or prior thereto.</p> <p>16 IT IS FURTHER STIPULATED AND AGREED</p> <p>17 that the notice of filing of the deposition by</p> <p>18 the Commissioner is waived.</p> <p>19</p> <p>20</p> <p>21 * * * * *</p> <p>22</p> <p>23</p>	<p style="text-align: right;">Page 4</p> <p>1 IN THE UNITED STATES DISTRICT COURT</p> <p>2 FOR THE NORTHERN DISTRICT OF GEORGIA</p> <p>3 GAINESVILLE DIVISION</p> <p>4</p> <p>5</p> <p>6 BEFORE:</p> <p>7 Paul Morse, Commissioner.</p> <p>8</p> <p>9 APPEARANCES:</p> <p>10 RICHARD HILL, ESQUIRE, of WEINBERG,</p> <p>11 WHEELER, HUDGINS, GUNN & DIAL, 3344 Peachtree</p> <p>12 Road, Suite 2400, Atlanta, Georgia 30326,</p> <p>13 appearing on behalf of the Defendant.</p> <p>14 TEDRA CANNELLA, ESQUIRE, of CANNELLA</p> <p>15 SNYDER, LLC, 315 West Ponce de Leon Avenue,</p> <p>16 Suite 885, Decatur, Georgia 30030, appearing on</p> <p>17 behalf of the Plaintiff.</p> <p>18 DEVIN MASHMAN, ESQUIRE, of CANNELLA</p> <p>19 SNYDER, LLC, 315 West Ponce de Leon Avenue,</p> <p>20 Suite 885, Decatur, Georgia 30030, appearing on</p> <p>21 behalf of the Plaintiff.</p> <p>22 ALSO PRESENT: Jess Wiggins, Video</p> <p>23 * * * * *</p>
<p style="text-align: right;">Page 3</p> <p>1 INDEX</p> <p>2</p> <p>3 EXAMINATION</p> <p>4 PAGE</p> <p>5 By Mr. Hill..... 6</p> <p>6 By Ms. Cannella..... 296</p> <p>7 By Mr. Hill..... 304</p> <p>8</p> <p>9</p> <p>10</p> <p>11 EXHIBITS FOR THE DEPOSITION</p> <p>12 PAGE</p> <p>13 Exhibit 1, Mr. Buchner's Report..... 7</p> <p>14 Exhibit 2, Rebuttal Report..... 178</p> <p>15 Exhibit 3, PowerPoint..... 186</p> <p>16 Exhibit 4, PowerPoint..... 251</p> <p>17 Exhibit P1, Example Image..... 303</p> <p>18</p> <p>19</p> <p>20 * * * * *</p> <p>21</p> <p>22</p> <p>23</p>	<p style="text-align: right;">Page 5</p> <p>1 I, Paul Morse, CCR, a Court Reporter of</p> <p>2 Mobile, Alabama, acting as Commissioner,</p> <p>3 certify that on this date, as provided by the</p> <p>4 Federal Rules of Civil Procedure and the</p> <p>5 foregoing stipulation of counsel, there came</p> <p>6 before me via Remote Videoconference, beginning</p> <p>7 at 10:00 a.m., G. Bryant Buchner, witness in</p> <p>8 the above cause, for oral examination,</p> <p>9 whereupon the following proceedings were had:</p> <p>10</p> <p>11 THE VIDEOGRAPHER: Today's date is</p> <p>12 July 11, 2024. And the time is 10:15 a.m.</p> <p>13 This will be the videotaped deposition of</p> <p>14 George Bryant Buchner.</p> <p>15 Would counsel present please identify</p> <p>16 themselves for the record, starting with the</p> <p>17 taking attorney.</p> <p>18 MR. HILL: This is Rick Hill on</p> <p>19 behalf of Defendant Rough Country.</p> <p>20 MS. CANNELLA: Tedra Cannella and</p> <p>21 Devin Mashman on behalf of the Plaintiffs, the</p> <p>22 Bryson family.</p> <p>23 THE VIDEOGRAPHER: Thank you.</p>

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<p style="text-align: right;">Page 6</p> <p>1 Would the Court Reporter please swear in the</p> <p>2 witness.</p> <p>3</p> <p>4 G. BRYANT BUCHNER,</p> <p>5 having first been duly sworn, testified as</p> <p>6 follows:</p> <p>7</p> <p>8 EXAMINATION</p> <p>9 BY MR. HILL:</p> <p>10 Q. Thank you, Mr. Buchner. I'm going</p> <p>11 to start with your May 8, 2024 letter to</p> <p>12 Ms. Cannella. And I will share my screen or at</p> <p>13 least attempt to share it --</p> <p>14 A. Okay.</p> <p>15 Q. -- and put that letter up. I'm</p> <p>16 sure you probably have it there in front of</p> <p>17 you.</p> <p>18 A. I'm really bad on dates. So I'll</p> <p>19 look at it and see what we're -- what we're</p> <p>20 talking about when you pull it up.</p> <p>21 Q. All right. Are you able to see</p> <p>22 the screen now?</p> <p>23 A. Yes, sir.</p>	<p style="text-align: right;">Page 8</p> <p>1 was run in October-ish of '23. The depo was in</p> <p>2 January. And I hadn't opened the file or</p> <p>3 looked at it. And when we went to retrieve it,</p> <p>4 it basically didn't exist. The run file did</p> <p>5 not exist. And so we could not -- we did</p> <p>6 everything we could to try to locate it and</p> <p>7 find it. And all that we can think of is that</p> <p>8 something happened during the save process.</p> <p>9 And so I had -- just had no idea that that</p> <p>10 thing wasn't there. I hadn't looked for it in</p> <p>11 months. So that's -- that's the unforeseen</p> <p>12 technical issue. It happens to, you know, all</p> <p>13 of us at times when you think you've saved</p> <p>14 something and it didn't get saved properly or</p> <p>15 maybe there was a corruption in the -- you</p> <p>16 know, on the computer disc somewhere. I don't</p> <p>17 know.</p> <p>18 Maybe somebody opened it later on and</p> <p>19 thought it was something else and moved it to a</p> <p>20 folder and we can't find it. I don't know.</p> <p>21 Q. What is the process after you run</p> <p>22 an HVE simulation to save the files associated</p> <p>23 with that simulation?</p>
<p style="text-align: right;">Page 7</p> <p>1 Q. All right. This is a letter from</p> <p>2 you to Ms. Cannella dated May 8, 2024. It's</p> <p>3 bates labeled Bryson 09348 through 09377. And</p> <p>4 I'd like to mark this as Exhibit 1 to your</p> <p>5 deposition.</p> <p>6 (Defendant's Exhibit Number 1</p> <p>7 is marked for identification.)</p> <p>8 A. Can we call it the FR26 amended</p> <p>9 report? Because that's -- that's why I didn't</p> <p>10 know what you were talking about. I'm okay if</p> <p>11 you call it a letter. But I'd rather call it</p> <p>12 the amended report.</p> <p>13 Q. Sure. The Re line says FR26</p> <p>14 amended report. And so I'll reference it by</p> <p>15 that name.</p> <p>16 A. Thank you kindly.</p> <p>17 Q. Sure. In the first paragraph</p> <p>18 you'll see that you use -- you state that an</p> <p>19 unforeseen technical issue resulted in the loss</p> <p>20 of the original simulation file. Just so we're</p> <p>21 clear, what do you mean by an unforeseen</p> <p>22 technical issue?</p> <p>23 A. Well, I think that the simulation</p>	<p style="text-align: right;">Page 9</p> <p>1 A. Well, it -- it really ought to be</p> <p>2 saved and moved into the -- you know, into the</p> <p>3 job file and put into engineering analysis,</p> <p>4 which you've probably seen my EA folders,</p> <p>5 engineering analysis folders. It wasn't --</p> <p>6 that -- that final step apparently didn't</p> <p>7 happen. It was still on the simulation</p> <p>8 computer. At least that's where we thought it</p> <p>9 was. And but it didn't -- it just wasn't in</p> <p>10 any other place. I don't think it ever got</p> <p>11 moved was the problem. That's the reason I --</p> <p>12 I needed to go get a copy of it.</p> <p>13 Q. And when you say later on in</p> <p>14 this -- on this page that -- at the bottom you</p> <p>15 said since the simulation had been corrupted,</p> <p>16 what do you mean by the term corrupted?</p> <p>17 A. Well, whatever we found did not --</p> <p>18 we went back to the archives and everything.</p> <p>19 We never found anything that looked like the</p> <p>20 accident one. And it's even suspect that the</p> <p>21 printout that I was using was -- was from the</p> <p>22 one that I had looked at back in October.</p> <p>23 So the word corrupted is kind of a general</p>

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<p style="text-align: right;">Page 10</p> <p>1 term between losing it, between, you know, 2 not -- not having the right data. It's just -- 3 it was meant to be a -- I think originally we 4 thought maybe it had been corrupted. But in 5 the end I think it's -- corrupted, the term 6 changed or something. But it couldn't be 7 opened. 8 But in the end, we -- we've never found one 9 that we think was it, period. 10 Q. So when you produced the printouts 11 prior to your deposition in January that 12 related to this original simulation, are you 13 saying that you are not sure whether those 14 printouts were the same printouts or data that 15 you were looking at when you ran the original 16 simulation in October? Explain that to me. 17 A. Yeah. That -- that's true. Back 18 in October I looked at the data. I looked at 19 the answers. They were printed -- or at least 20 I asked for them to be printed. I don't -- you 21 know, I'm not the printer guy or the filer guy. 22 And it's almost as if what was picked up was an 23 early iteration or something because some of</p>	<p style="text-align: right;">Page 12</p> <p>1 But what we have now is -- is a 2 representation of everything I said in my -- in 3 my deposition. And it gives the right answers. 4 It gives the same answers that I thought I had 5 at the time of the depo. 6 Q. When did you discover that the 7 printouts that you provided to us related to 8 the original simulation that were provided a 9 week before your deposition in January, when 10 did you discover that those were not correct or 11 did not have the, you know, appropriate data 12 reflecting the simulation that you produced 13 that we discussed in your first deposition? 14 A. Well, it -- I mean, it may have 15 been a couple of months. We were under the 16 mistaken belief that we were just looking for a 17 file. And then as time went on and we kept 18 peeling back, looking and thinking, we went all 19 the way back and finally opened that up and 20 looked and said, okay, let's try to rerun with 21 this data. And then we started trying to do 22 the rerun and we realized things weren't -- I'm 23 going to use the -- things were consistent with</p>
<p style="text-align: right;">Page 11</p> <p>1 the data was just wrong. 2 And so I -- you know, it was months before, 3 but I thought that we had had -- that we had 4 all of that. And during the deposition, I 5 clearly said, no, these are all of the reports 6 that are there. I hadn't gone back and 7 checked. They clearly weren't all of the 8 reports. And so we went and just did 9 everything we could, and we could not resurrect 10 anything that I can be confident was what I had 11 looked at back in October. 12 So we can make some guesses. But I can't 13 make -- I can't know. So my opinions are -- 14 you know, were well recorded in my depo and, 15 you know, the opinions haven't changed. But we 16 really just had to re-enter the data. And we 17 made an improvement or two, you know, that -- 18 you know, to make sure that we had it right 19 like the 0.04 inches on the tire or something 20 like that, whatever it was. But you know, so 21 at the end of the day, we don't have anything 22 that survived that I can validate as being what 23 I looked at back in October.</p>	<p style="text-align: right;">Page 13</p> <p>1 what I'd said in my deposition. So I mean, it 2 was -- and we had other work that was going on. 3 We had prepared for the depo, and we were busy 4 with other things. 5 And so what I thought was a simple, hey, go 6 find the file and present it kept getting 7 harder and more complicated and more 8 complicated. And we kept realizing that we had 9 a bad concept, which is that we were just 10 looking for a missing file. What we were 11 looking for was something that probably didn't 12 exist. 13 Q. So just to be clear, when you run 14 an HV simulation, it produces a graphical 15 depiction of the crush -- 16 A. Yes. 17 Q. -- based on the simulation. 18 Correct? 19 A. Yes. If you -- if you ask it to, 20 it will. 21 Q. Right. It can do that? 22 A. Yes. 23 Q. And that was produced with regard</p>

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<p style="text-align: right;">Page 14</p> <p>1 to your original simulation prior to your first 2 deposition?</p> <p>3 A. Yes.</p> <p>4 Q. And was that graphical 5 representation of the crush with the other data 6 that's on there, was that consistent with the 7 HV simulation that you actually ran in October, 8 or was that also corrupted as well?</p> <p>9 A. I -- all I have is the images. 10 I -- I can't tell. That's part of the problem. 11 So we've generated new images. You can't tell 12 the difference in the new images and the old 13 images, at least I can't visually looking at 14 them because the -- the crush is very similar. 15 In other words, it would take -- you know, 16 you'd have to make some pretty fine 17 measurements to see if there's differences. 18 But so I don't know. What I know is that what 19 we've -- what we have provided in this 20 supplemental report is consistent with what 21 I've said in the deposition. And it's -- and 22 we have made sure as best of our ability to get 23 the numbers that I used in my deposition the</p>	<p style="text-align: right;">Page 16</p> <p>1 well.</p> <p>2 Q. Sure. Sorry if it wasn't crafted 3 very artfully. Let me try to make it simpler. 4 So you just said that the graphical 5 representation of the crush and the data on 6 that that was produced to us prior to your 7 deposition, that it -- you can't confirm 8 whether it actually is representative of the 9 simulation you ran in October of 2023?</p> <p>10 A. Not exactly. It is -- it is 11 representative in that I can't tell the 12 difference between it and what we ran. In 13 other words, it looks -- it looks like what I 14 remember. It looks like what our results are 15 today. But I can't tell you if it actually was 16 the printout from it. But the crush that's 17 shown there is -- is representative because 18 it's indiscernible from the crush that we know 19 is reasonable and accurate in the rerun.</p> <p>20 Q. Right. When you -- 21 A. Yeah. So thank you. 22 Q. Well, that's a -- that's a good 23 answer. But even though it may be similar or</p>
<p style="text-align: right;">Page 15</p> <p>1 way I said I thought we had run it correct 2 here.</p> <p>3 Q. All right. I appreciate that. 4 But I'd like to just first talk about the 5 original simulation. We'll get to the rerun or 6 amended simulation. But with regard to the 7 original simulation that was produced to us in 8 October of 2023 and upon which your initial 9 deposition was based and upon which your report 10 was based, I want to make sure I'm 11 understanding. What you produced to us in 12 January that related to that original 13 simulation, not just the backup files but also 14 the results of the simulation, are you saying 15 that you can't confirm that anything related to 16 the simulation that was produced to us prior to 17 your deposition was actually representative of 18 the October simulation that you ran that you 19 based your opinions on?</p> <p>20 A. Okay. Really long question. Ask 21 the last part of it so I know the crux of the 22 question. I heard every -- I heard the lead-in 23 really well. I didn't hear the question really</p>	<p style="text-align: right;">Page 17</p> <p>1 representative, you can't verify that it's the 2 actual result of the -- the original 3 simulation?</p> <p>4 A. Right. It was indiscernible to me 5 from the actual result.</p> <p>6 Q. Right. 7 A. But I can't tell you if that was 8 actually printed from the actual result. But I 9 can tell you that it was good enough that it -- 10 that I did not detect it when I was using it 11 for the deposition.</p> <p>12 Q. Right. And the same question with 13 regard to all of the backup files that related 14 to that original. I don't want to go through 15 every one individually, so we'll start it with 16 a broad question. 17 You have a certain number of backup files, 18 an environment file, this file, that file. Is 19 the same true that all of those files that 20 were -- that were printed and produced to us, 21 the ones you could find prior to your 22 deposition, you can't verify if those were the 23 actual files that were generated when you ran</p>

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<p style="text-align: right;">Page 18</p> <p>1 the original simulation?</p> <p>2 A. I don't -- I don't think at the</p> <p>3 end of the day they were. I mean, that's part</p> <p>4 of my problem that, you know, that work had</p> <p>5 been done back in October. Somehow in the</p> <p>6 saving and filing process, what we -- what I</p> <p>7 was looking at and what I did, did not make it</p> <p>8 into the file.</p> <p>9 Q. Okay. And so another way maybe to</p> <p>10 put it would be the October simulation upon</p> <p>11 which you base your report was not saved and</p> <p>12 put aside in the file in the form that it</p> <p>13 existed when the original simulation was run?</p> <p>14 A. Yes.</p> <p>15 Q. And then when you went to produce</p> <p>16 it prior to your deposition, you went back in,</p> <p>17 and it had been changed or corrupted or</p> <p>18 something was different about it when you went</p> <p>19 back in to produce it to us prior to your</p> <p>20 deposition?</p> <p>21 A. Right. We could never find a file</p> <p>22 that we had any confidence -- or that was the</p> <p>23 file that we had used in October. It just --</p>	<p style="text-align: right;">Page 20</p> <p>1 know, we -- it took a couple of months. I</p> <p>2 don't know the exact time. But it wasn't a</p> <p>3 week for sure. It was unfortunately an</p> <p>4 extended period of time because I was -- I</p> <p>5 thought it was going to be an easy process, and</p> <p>6 it wasn't. And then in the end, you know, it</p> <p>7 took more -- a couple months or more.</p> <p>8 Q. And when you say it took a couple</p> <p>9 months or more, you mean from when? From the</p> <p>10 time of your deposition?</p> <p>11 A. Oh yeah. It was months after the</p> <p>12 deposition.</p> <p>13 Q. That's what I'm trying to clarify.</p> <p>14 A. Yes. But I don't know how long.</p> <p>15 I'm just trying to give you an approximate</p> <p>16 feeling for the timeframe. It wasn't days or</p> <p>17 weeks. It was months. I don't know how long.</p> <p>18 Q. And so you don't know an exact</p> <p>19 date that you finally realized, hey, not only</p> <p>20 can we not find the missing files, but the</p> <p>21 files that we produced during the deposition</p> <p>22 were not connected with the initial simulation.</p> <p>23 You -- those were two different discoveries.</p>
<p style="text-align: right;">Page 19</p> <p>1 just we could not in any shape, form, or</p> <p>2 fashion locate that. So we had to redo it.</p> <p>3 Q. Okay. And so none of the data</p> <p>4 files, whatever, related to the original</p> <p>5 simulation upon which you based your -- your</p> <p>6 initial report in October exist as this -- as</p> <p>7 of this time, at least that you can find?</p> <p>8 A. That is true.</p> <p>9 Q. Okay. And when did you discover</p> <p>10 that all of the data and all of the files</p> <p>11 related to that original simulation no longer</p> <p>12 existed?</p> <p>13 A. Like I said, it took a couple of</p> <p>14 months. We were working on other things. I</p> <p>15 thought it was a simple procedure. It happens</p> <p>16 commonly that a file gets left on another</p> <p>17 computer, doesn't make it in, or a miscopy is</p> <p>18 put in. And we were doing other work that was</p> <p>19 scheduled. And every time I inquired, we're</p> <p>20 working on it and we thought somebody would say</p> <p>21 they -- they did something. And when I</p> <p>22 investigated, I said no, this isn't it; you've</p> <p>23 got to keep looking. And then eventually, you</p>	<p style="text-align: right;">Page 21</p> <p>1 Right?</p> <p>2 A. Ask that question again.</p> <p>3 Q. Sure. So there were certain</p> <p>4 backup files that were missing at the time of</p> <p>5 your deposition. There was -- there was no</p> <p>6 data produced of any type at your deposition.</p> <p>7 Correct?</p> <p>8 A. No. You're --</p> <p>9 MS. CANNELLA: Object to the form</p> <p>10 of the question as vague.</p> <p>11 A. The -- the HVE run files were not</p> <p>12 produced at the time of the deposition.</p> <p>13 Q. Right.</p> <p>14 A. Some printout reports -- some</p> <p>15 printout reports were produced. Thank you.</p> <p>16 Q. Right. And so you thought you</p> <p>17 were just looking for the missing HVE run file</p> <p>18 at the time after --</p> <p>19 A. After -- when I -- when I walked</p> <p>20 out of my deposition, I thought I was missing</p> <p>21 whatever HVE files were used to generate the</p> <p>22 reports that I -- that were in the book in the</p> <p>23 deposition. Yes.</p>

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<p style="text-align: right;">Page 22</p> <p>1 Q. Right. But you believed the files 2 that you did print and produce were actually 3 accurate and associated with the original 4 simulation? 5 A. Yes. 6 Q. Okay. And so that's two different 7 discoveries. One is we can't find the HVE run 8 file. Right? 9 A. Yes. 10 Q. And two is, oh, the files we did 11 produce were not associated with the original 12 simulation? 13 A. Well, the reports we did produce, 14 yes. 15 Q. Right. And so when did you 16 discover that the reports that you produced 17 were not associated with the original 18 simulation? 19 A. Well, that took a long time, as I 20 said earlier, because we thought we were just 21 looking for a missing electronic copy. When we 22 couldn't find that, then we said, okay, we need 23 to reproduce a reasonable electronic copy.</p>	<p style="text-align: right;">Page 24</p> <p>1 Something -- something from another preliminary 2 effort, you know, made it in there. That's -- 3 so it's a filing error. That's -- that's all 4 that happened. I don't know what it was. I 5 had no idea other than when I tried to 6 validate what I testified to, what I had 7 recorded as, you know, what the runs showed me 8 and what I tried to testify to, it didn't -- it 9 was inconsistent with what I had that was in 10 the file. 11 Q. And you just alluded to you think 12 those were preliminary runs, meaning runs done 13 prior to your original simulation? 14 A. Right. The -- all simulations are 15 iterative. All calculations are iterative. 16 You have to start building it and work on it. 17 But there were -- yeah, so it's just -- this -- 18 that was not the final work that was there 19 and -- period. 20 Q. But it existed in January. And 21 you went to print them out to produce them for 22 your deposition? 23 A. No. No. They had been printed</p>
<p style="text-align: right;">Page 23</p> <p>1 We started trying to use the reports, and I 2 found some things that -- that were 3 inconsistent with what my memory was as to what 4 should have been there. So suddenly we started 5 looking at those reports and we realized, hey, 6 something -- something looks like it happened 7 on that level as well. So that took a while. 8 It was -- it was not weeks or days. It was -- 9 it was, you know, over a month for sure. 10 Q. How did the reports survive but 11 the HVE run files did not? 12 A. Okay. Well, and that's -- I've 13 already alluded to that. But at the time of my 14 deposition, I thought all of the reports had 15 been printed and that's what I testified to. I 16 thought they had just been printed and put in 17 the file. That's what me belief was back in 18 October when we did it. But what was there was 19 only partial reports. 20 And so somehow in the printing process -- 21 and whoever was getting them or whoever was 22 filing them, what -- what I was using back in 23 October did not end up in the file.</p>	<p style="text-align: right;">Page 25</p> <p>1 way back in October. And I hadn't touched them 2 for months. I didn't even -- I didn't even 3 look at them getting ready for the deposition 4 because they -- all of that work had been 5 finished in October, to my knowledge, and it 6 had been put in the file. And we had 7 summarized the results in I think the -- the 8 FR26 report we did, and that's what I was 9 using. 10 Q. Okay. So that's what I want to 11 make sure I understood. So the printouts of 12 the reports that were produced, including the 13 results of the simulation, you're -- you're 14 saying those were printed out back in October 15 contemporaneous with the running of the 16 original simulation? 17 A. Well, that's -- that's the problem 18 is I don't know because the -- my -- look, my 19 intent is to do the work and then file the 20 work. Do the work, file the work, use the 21 work. I -- something happened between when I 22 did that and wrote the report. I don't 23 remember the date of the report. Does anybody</p>

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<p style="text-align: right;">Page 26</p> <p>1 remember the original report? Because it will 2 help me. 3 Q. October 13, I believe. 4 A. Okay. So that's why I keep saying 5 I didn't -- as we were writing that report, I'm 6 using -- I'm looking at something on a computer 7 screen, and I'm doing my work. I'm getting my 8 report done. Then months later I -- you know, 9 I believe that that stuff has been properly 10 filed by my staff. And -- and you know, I 11 mean, heck, it could be me that didn't hand the 12 right document. I thought something had been 13 printed. 14 I'm not blaming anybody. I'm just saying 15 something happened with whatever I was using in 16 October that I relied on that was still there 17 in January. I testified using my final report. 18 And then when I tried to give it to you or 19 referenced it, it -- the documents that I 20 thought were there weren't there. That's -- 21 that's what happened. 22 I -- if I had known there was a mistake in 23 October, I would have -- I gladly would have</p>	<p style="text-align: right;">Page 28</p> <p>1 know what my intent was with what I was using. 2 But as I sit here, I -- I don't know. That was 3 a -- that was some kind of a problem that 4 happened. And I don't know when it happened 5 exactly. But I do know that when I wrote my 6 report in October 12, I think is what you told 7 me, 2023, I had data that I was using. And 8 I -- you know, it's not uncommon for me to have 9 my working copy that I'm using to type the 10 report, and then my work copy goes in the trash 11 can. 12 And the file copy is supposed to be in the 13 file. Well, that file copy wasn't what I used 14 to do my FR26 report. I mean, that's just -- 15 and then the electronic file was supposed to be 16 there to go back and resurrect. It -- it's not 17 there. 18 Q. So you don't know when the file 19 copy was printed that was produced to us? That 20 was my question. 21 A. My -- my belief was it would have 22 been done back in August. But I mean, it's 23 possible someone, you know -- I said August.</p>
<p style="text-align: right;">Page 27</p> <p>1 fixed it, you know, before the deposition or 2 would have, you know, reproduced that work. 3 I -- I just didn't know. We had too many other 4 things we were working on in this case and 5 other cases that -- I had confidence in my 6 filing process. And anybody that's ever tried 7 to file anything knows that that happens from 8 time to time. 9 Q. All right. Well, whatever reports 10 are associated with your original simulation -- 11 A. Uh-huh. 12 Q. -- or let me -- or scratch that. 13 I'll ask it a different way. 14 The reports related to an -- no. Scratch 15 that. Let me think through this a second. 16 Hold on. 17 You -- your office produced to us prior to 18 your deposition in January of 2024 reports 19 related to an HVE simulation. And are you 20 telling me that you can't identify when those 21 documents were printed that were produced to us 22 prior to your deposition? 23 A. No, I didn't -- I don't know. I</p>	<p style="text-align: right;">Page 29</p> <p>1 In October is what I meant. I don't -- I don't 2 know. 3 When I started this conversation, I would 4 have said it was in October because that's when 5 it was supposed to have been. But as I sit 6 here, I didn't do the printing of that 7 document. And I didn't do the filing of that 8 document to the best of my knowledge. And it's 9 not the same document I was using when I did my 10 October letter. 11 Q. Prior to -- sorry. Go ahead. I 12 didn't mean to -- 13 A. So the answer is I don't know. 14 Thank you. 15 Q. And prior to your deposition, you 16 also produced some digital files related to the 17 HVE simulation. Correct? 18 A. I don't remember that. 19 Q. Okay. We asked for you to produce 20 the actual digital files that related to your 21 HVE simulation. And my understanding is that 22 you produced to us the digital files you could 23 find, but you couldn't find the HVE run file.</p>

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<p style="text-align: right;">Page 30</p> <p>1 Is that your understanding?</p> <p>2 A. I don't -- I don't remember that.</p> <p>3 My memory is just not -- it's just blank on</p> <p>4 that. I don't know. If you have those files,</p> <p>5 that's great. If you don't, I don't -- I don't</p> <p>6 know the answer to the question.</p> <p>7 Q. Well, they would obviously</p> <p>8 represent the printouts. And so if those files</p> <p>9 were actually produced, you don't know, you</p> <p>10 know, if they relate to the original simulation</p> <p>11 or not. Right?</p> <p>12 A. Because I don't know what files</p> <p>13 you're talking about. I can't even answer the</p> <p>14 question.</p> <p>15 Q. Okay. When you did the rerun,</p> <p>16 you -- you did properly save the HVE files</p> <p>17 related to the rerun. Right?</p> <p>18 A. And those were -- and those were</p> <p>19 sent out with the amended report. My</p> <p>20 understanding is you should have those, yes.</p> <p>21 Q. Right. And what was the process</p> <p>22 used to save those files?</p> <p>23 A. I don't know. I didn't do that.</p>	<p style="text-align: right;">Page 32</p> <p>1 licenses. That's on another computer.</p> <p>2 Q. Who was the person that performed</p> <p>3 that job with regard to the original</p> <p>4 simulation?</p> <p>5 A. Jacob Brennan.</p> <p>6 Q. All right. And so who performed</p> <p>7 that job with regard to the rerun?</p> <p>8 A. Jacob Brennan.</p> <p>9 Q. Okay. And you're saying that you</p> <p>10 don't know the process for saving and</p> <p>11 preserving the HVE files, that I would have to</p> <p>12 have -- ask Jacob about that process?</p> <p>13 A. No. You click save, and it goes</p> <p>14 on that computer. And then you take a copy of</p> <p>15 that, and you put it, you know, on the server</p> <p>16 where it could be provided to people like you.</p> <p>17 That's -- I don't -- you know, that's the same</p> <p>18 for every single file. Everybody in the</p> <p>19 building has their own work and they save it</p> <p>20 how they want to under what name they want and</p> <p>21 just put it on the server. And then I -- you</p> <p>22 know, if I want to change the name of it or</p> <p>23 something, I can. But it's the same -- I don't</p>
<p style="text-align: right;">Page 31</p> <p>1 It was -- it was done by the gentleman that</p> <p>2 input the data. And I haven't actually opened</p> <p>3 that file myself. I said -- I verified that</p> <p>4 that file is this file that I have these</p> <p>5 reports from. He said he did that. And then</p> <p>6 that was sent to you.</p> <p>7 Q. Okay. So explain that to me. So</p> <p>8 you don't actually run the simulation. You</p> <p>9 just provide instructions for someone else to</p> <p>10 run the simulation?</p> <p>11 A. No, I'll never open it and I'll</p> <p>12 never save it. I'll go -- I will go make</p> <p>13 adjustments to it or look at it and I will sit</p> <p>14 with him when he does that as needed. Yes.</p> <p>15 But I'm not the -- I don't open/take care of</p> <p>16 the HVE software suite. All of that is done by</p> <p>17 someone else. I'm a user of it. And I don't</p> <p>18 end up saving it because we -- I don't want to</p> <p>19 make a mistake on it. I want the person who's</p> <p>20 running that to -- to do that job.</p> <p>21 Q. Who is --</p> <p>22 A. And I can't run them on my</p> <p>23 computer in here because I don't have the right</p>	<p style="text-align: right;">Page 33</p> <p>1 know what -- I mean, I wasn't there when he</p> <p>2 clicked the button. But we all know how to</p> <p>3 save a file.</p> <p>4 Q. Okay. And how do you review it</p> <p>5 once he runs the report? Does he print it out</p> <p>6 for you? Do you click on the report on a</p> <p>7 computer? How do you review it once it's been</p> <p>8 run?</p> <p>9 A. All of the above. I mean, it</p> <p>10 depends on how I want to do it that day.</p> <p>11 Q. Okay. And so you might actually</p> <p>12 access the actual file on your computer and</p> <p>13 look at it in digital form?</p> <p>14 A. You may be misleading there.</p> <p>15 Q. Okay.</p> <p>16 A. If it's -- if it's saved as a</p> <p>17 PDF --</p> <p>18 Q. Okay.</p> <p>19 A. -- I can access it and read it at</p> <p>20 my computer. But I can also print it and then</p> <p>21 just look at it in hard copy form. However I</p> <p>22 want to do it on that day depending on what my</p> <p>23 schedule is and what I'm -- you know, what my</p>

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<p style="text-align: right;">Page 34</p> <p>1 needs are. I mean, someone else may be -- you</p> <p>2 know, it may be better for me to go to a</p> <p>3 conference room where I can spread out. It</p> <p>4 depends on what I'm -- on what's convenient for</p> <p>5 me on that day.</p> <p>6 Q. Right. I guess what I'm trying to</p> <p>7 clarify is you're not actually going into the</p> <p>8 HVE software and opening up that. You're</p> <p>9 looking at it either in a PDF of the results or</p> <p>10 a printed version of the results?</p> <p>11 A. Right. Of the report. And but --</p> <p>12 but when he's running it, I have the option to</p> <p>13 go back in sitting with him. And you know, if</p> <p>14 he has a question, I'll drop in and -- and, you</p> <p>15 know, talk about what's going on and where he</p> <p>16 is or he can come and, you know, make a choice</p> <p>17 for him. Or if he wants he'll come down here</p> <p>18 and ask me a question when he's doing it.</p> <p>19 So you know, it's all of the above. It's,</p> <p>20 you know, pretty normal stuff. It's the way</p> <p>21 all of our technical programs work.</p> <p>22 Q. Right. So -- so you might sit</p> <p>23 there and advise him at his computer station</p>	<p style="text-align: right;">Page 36</p> <p>1 how I did that. But I do know that when I</p> <p>2 wrote the report, I was looking at outputs that</p> <p>3 I was confident from a -- were the</p> <p>4 representative simulation run that I was</p> <p>5 intending to run at that time.</p> <p>6 Q. And those outputs would have been</p> <p>7 either a printed format or a PDF file?</p> <p>8 A. Potentially, yes. I don't know.</p> <p>9 Q. And in order to print them, you</p> <p>10 have to convert them to a PDF file. Correct?</p> <p>11 A. Usually, yes.</p> <p>12 Q. Okay.</p> <p>13 A. But I'm not -- you know, he can --</p> <p>14 he can probably print them directly. I don't</p> <p>15 know. I have not done the printing out of the</p> <p>16 program. I'd have to go see. I don't know if</p> <p>17 he can print just directly from</p> <p>18 Engineering Dynamics HVE Suite. I don't know</p> <p>19 the answer.</p> <p>20 Q. Well, with regard to the rerun,</p> <p>21 after he ran the report, he created a PDF file</p> <p>22 which you then used to produce to us prior to</p> <p>23 this deposition.</p>
<p style="text-align: right;">Page 35</p> <p>1 with regard to modifications or inputs into the</p> <p>2 software?</p> <p>3 A. Sure.</p> <p>4 Q. Right. But then when you go to</p> <p>5 review the results, you're going to look at the</p> <p>6 results that have been generated and converted</p> <p>7 to a PDF file?</p> <p>8 A. Well, I can -- I can look at them</p> <p>9 on his computer as well over his shoulder</p> <p>10 before he saves them as well.</p> <p>11 Q. Right. Which did you do in</p> <p>12 preparing your October 2023 report?</p> <p>13 A. I would have had something I could</p> <p>14 work from. I mean, as I told you earlier, I</p> <p>15 mean, I would have had a working copy for me</p> <p>16 that's just a working copy. If I want to edit</p> <p>17 a report, I'll print it out and I'll edit it</p> <p>18 and I'll get on the computer and make the</p> <p>19 changes and then I'll throw the working copy</p> <p>20 away --</p> <p>21 Q. Right.</p> <p>22 A. -- because it's just a working</p> <p>23 copy. So I don't remember at this time exactly</p>	<p style="text-align: right;">Page 37</p> <p>1 A. Yes.</p> <p>2 Q. Correct?</p> <p>3 A. Yes. And that's what -- that's</p> <p>4 what I thought had been done in a proper</p> <p>5 fashion before the first deposition. I thought</p> <p>6 I was using -- I thought I had in the file a</p> <p>7 complete file of what was then printed because</p> <p>8 that's what I testified to. That's what was my</p> <p>9 understanding. But it wasn't -- it wasn't</p> <p>10 accurate.</p> <p>11 Q. The actual HVE files are different</p> <p>12 obviously from the PDF file that is just a -- a</p> <p>13 collection of the results. Those are two</p> <p>14 different types of files. Correct?</p> <p>15 A. Yes.</p> <p>16 Q. All right. And -- well, scratch</p> <p>17 that. That's enough. On the second page of</p> <p>18 what I have up on the screen bates labeled</p> <p>19 9349 --</p> <p>20 A. Yes, sir.</p> <p>21 Q. -- second paragraph you say our</p> <p>22 attempts to precisely reproduce the simulation</p> <p>23 discussed in your October 12, 2023 report were</p>

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<p style="text-align: right;">Page 38</p> <p>1 unsuccessful because data used in that 2 simulation was lost. 3 Did I read that correctly? 4 A. Yes. 5 Q. And my question is, there were 6 printouts and data from -- that were produced 7 to us that were believed to be from the 8 original simulation. And so when you say the 9 data was lost, what do you mean by that? 10 A. Two fold. Potential answers and 11 then you can choose what's relevant to your 12 question. I've already told you that the run 13 files were lost and -- and the -- whatever 14 files were used to generate the documents that 15 I used to do my initial report as far as the 16 electronic copies were not present. 17 The second thing is, in the reports that 18 were printed out, HVE does surrounding and 19 doesn't report all of the input data 20 necessarily. So -- so numbers can have 21 extended decimal places beyond what the report 22 shows. So let's say a 0.8 might show up as a 23 one because of rounding. Because of that</p>	<p style="text-align: right;">Page 40</p> <p>1 A. Well, no because we were still 2 under the confusion that we could do that. In 3 other words, we didn't -- basically if someone 4 wanted to try to reproduce -- wanted to put the 5 data we have in, I mean, they could do it and 6 they'd get the same answer we'd get. But we 7 didn't understand the problem fully. It took a 8 while to discover all of the problems. So no, 9 we weren't -- we didn't even know what problem 10 we were solving at that time. 11 Q. All right. Did you -- I know 12 you're saying the data that you used from the 13 printouts you produced to us did not create the 14 result that you expected. Was there any 15 missing data or was it just you had all of the 16 data but it didn't -- it wasn't correct? 17 A. There's missing data as well. The 18 reports -- remember, not all of the reports 19 were printed. I told you that. There just -- 20 there was missing data. And we couldn't -- we 21 realized we were going to have to start adding 22 to those reports. And then we also knew that 23 the report numbers weren't precise. So you</p>
<p style="text-align: right;">Page 39</p> <p>1 it's -- when we tried to use the data that was 2 shown, we just did not -- we knew that -- that 3 that was not accurate to what had been used 4 because it didn't produce the right result. So 5 the -- I think it's a 17.92 mile per hour 6 delta-V for the F-250 wasn't working. So what 7 it means is the reported -- the reports are 8 incomplete as far as to the level of detail 9 that's needed sometimes to regenerate the -- 10 the run. 11 So on two levels, we just could not -- we 12 could not use what we had to reproduce the 13 simulation run. So we just -- like I said, it 14 took a couple of months to figure out that it 15 wasn't going to work. And then we just said, 16 okay, let's just rerun with the input data that 17 we know is accurate, the weights, the 18 delta-V's, everything, and you know, just do it 19 the way that I said in the deposition. And 20 that's what we have today. 21 Q. When you first attempted to 22 reproduce the original simulation with the data 23 that you had, did you save that simulation run?</p>	<p style="text-align: right;">Page 41</p> <p>1 couldn't just input the report numbers. You 2 wouldn't get a robust answer. I mean, you'd 3 probably get, you know, an approximate answer. 4 But we wanted the right answer, similar to what 5 was in my FR26 report. 6 Q. All right. So obviously if you're 7 not able to reproduce the original simulation 8 based upon the data you have, you wouldn't 9 expect anyone else to be able to reproduce your 10 original simulation because the only data they 11 would have would be the same data that you had? 12 A. Well, they could use my deposition 13 and -- and the file materials that I had and 14 pluck the data out of my deposition and the 15 file materials and input it, and they would get 16 a very similar result to what we have, yes. 17 They could do it that way. But you could not 18 use the reports, just like I couldn't use the 19 reports. Nobody could use those reports to get 20 it as accurate as it should be. 21 Q. How many simulations have you run 22 beyond the original simulation and the rerun 23 simulation?</p>

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<p style="text-align: right;">Page 42</p> <p>1 A. I don't -- I don't know. 2 Q. You haven't saved any other than 3 the rerun simulation. Correct? 4 A. Now, there will be -- some of our 5 attempts are archived. In other words, some of 6 the process that we used is archived. It's not 7 relevant though to my final opinions if you 8 want to do a forensic examination of the 9 process. You know, I mean, there's something 10 around you could use for that. But I'm here to 11 give opinions about a particular accident. And 12 so I'm confident in what we have given you. 13 But yeah, some of that process is saved. But 14 it's -- it was basically put aside because we 15 realized that we didn't have the files to do 16 it. And then we just redid it per my 17 deposition, per the data in the file, per the 18 right everything and -- and ran it. 19 Q. And those archived files related 20 to your other run simulations, they've not been 21 produced to Ms. Cannella. Correct? 22 A. No. Because they're not relevant 23 to my opinions.</p>	<p style="text-align: right;">Page 44</p> <p>1 other than what you've described that you 2 haven't produced to Ms. Cannella that relate to 3 your work in this case? 4 A. Oh, they don't relate to my work 5 in this case. They relate to my work to try to 6 find the file and try to -- try to use a file 7 that, you know, was corrupt. But no, there's 8 nothing -- you have everything I'm using for my 9 opinions. You have everything that I have done 10 in this simulation to try to -- well, to 11 reproduce the work and even, you know, slightly 12 improve the work, consistent with my 13 deposition. You have that. 14 Q. All right. When did you first 15 become aware of the date of Wes Grimes's 16 deposition, your counterpart for the Defense? 17 A. I knew of it. I'm guessing, but 18 it's, you know, a few weeks at most before 19 that. 20 Q. Okay. So -- 21 A. His deposition date is not 22 particularly an issue for me. 23 Q. Right. But I'm -- I'm curious</p>
<p style="text-align: right;">Page 43</p> <p>1 Q. They relate to your work in this 2 case though. Correct? 3 A. But not work to give my opinions 4 in the -- in what happened in the accident. 5 They only relate to us trying to find a missing 6 file and missing data. So we worked really 7 hard, but that was -- and that's -- that's just 8 bonus -- that's a bad word to use. That's -- 9 that's work that we did trying to fix a 10 problem. 11 But as far as my -- and that had nothing to 12 do with my analysis of this accident. That 13 just had to do with trying to -- trying to 14 resurrect information. So practically you have 15 everything that we did to fix the simulation 16 run to be accurate for the use of engineering 17 on this file. If there's some in between 18 that's unrelated -- and that's what I'm telling 19 you about in our efforts to resurrect it -- we 20 do have some stuff for that. But no, that 21 hasn't been given to anybody because it's not 22 worth anything as an engineering opinion. 23 Q. Are there any other archived files</p>	<p style="text-align: right;">Page 45</p> <p>1 when were you told about his deposition date. 2 Do you recall? 3 A. I don't. 4 Q. All right. Did you -- did you 5 talk with Ms. Cannella and help her to prepare 6 for that deposition? 7 A. If anybody remembers when Wes 8 Grimes's materials were produced, that -- I'm 9 sure I looked at those and told her what we 10 saw. And I remember one thing very 11 specifically. So yes, I did help her in some 12 way. Yes, I did. 13 Q. All right. And what was the 14 date -- the date that you ran the rerun 15 simulation, or at least when you finalized it? 16 We know that you did some preliminary runs that 17 haven't been produced that weren't the final 18 run that you're relying upon. But when did you 19 produce the final simulation run that you've 20 produced to us and that you're relying upon in 21 this case? 22 A. Yeah, I disagree with your 23 characterization. But I understand the</p>

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<p style="text-align: right;">Page 46</p> <p>1 question. So when was it run? I don't know 2 off the top of my head. There may be a date on 3 it if I can find it here. This is the FR26. 4 You've got it up right there. All you have to 5 do is look at the top and see if there's a 6 date. 7 Q. I don't whether it's when it was 8 printed or when it was run. But if you look at 9 appendix B that I have up on the screen -- it's 10 not showing up for some reason. I don't know. 11 I want you to verify, it has a date on what you 12 produced as appendix B of May 8, 2024, 17:10. 13 Is that the date that you ran the simulation? 14 A. That -- I don't know. It could 15 just be -- the simulation can be run on that 16 date to generate all of the reports and printed 17 on that date. Yes, sir. I don't know if 18 that's the exact date it was originally run. 19 But it was probably rerun on that date to make 20 sure we had the right copies printed out so 21 that whatever adjustments or whatever inputs 22 had been refined for the report were accurate 23 to the report.</p>	<p style="text-align: right;">Page 48</p> <p>1 May 8, the same day as this. And you would 2 have needed this prior to preparing your 3 report, I believe is what you just said, in 4 order to prepare the report? 5 A. Right. So I had some working copy 6 printouts we would have used. And then we 7 would have tried to run and save and get 8 everything compiled to go with this for whoever 9 wanted it. 10 Q. Now, you verified that others 11 could not have used the original HVE data used 12 by -- in order to reproduce your simulation or 13 to test your simulation? 14 A. I didn't hear a word you said -- I 15 missed a couple of your words, please, if you 16 could help me. 17 Q. All right. Sorry. Can you hear 18 me now? 19 A. I can hear you. Just a couple of 20 them were garbled. 21 Q. Okay. I believe what you 22 testified to is that in order for someone to 23 attempt to simulate your original simulation or</p>
<p style="text-align: right;">Page 47</p> <p>1 Q. Is there a way to determine the 2 date the report was actually run? 3 A. I don't know. But I think it was 4 run on that date. 5 Q. All right. So you believe that at 6 least it was run for the purposes of producing 7 a PDF file to produce to us? 8 A. That's my belief. But -- that's 9 my belief, yes. But I'm just giving you the 10 best answer I can. 11 Q. Right. But it could have been run 12 any time before that date, original? 13 A. Well, not any time. Approximate 14 of that, yes. I understood that I needed to 15 write a report. And we were -- what was -- the 16 report was about this simulation. And the 17 simulation was run proximally doing the report. 18 I would have done the report at the time we 19 were finishing the simulation, yes. But it's 20 proximal to that. It takes a while to write a 21 report though, so you know, it could have been 22 a week before. 23 Q. Right. So the report is dated</p>	<p style="text-align: right;">Page 49</p> <p>1 to test it, they would have had to have ignored 2 the HVE data that you produced originally and 3 have relied solely upon your deposition 4 testimony and disregarded the actual HVE data 5 in order to try to reproduce your original 6 simulation. Is that fair? 7 MS. CANNELLA: Object to the form 8 of the question. Misstates his testimony. 9 Q. Well, you can correct me if it's 10 wrong. 11 A. I didn't feel like that was fair. 12 No, sir. I... 13 Q. Well, what's the answer to the 14 question? 15 A. You asked me was it fair. 16 Q. No. No. I didn't ask you -- I 17 asked you to answer the question if you can. 18 MS. CANNELLA: The question was, 19 is that fair, I think is what Mr. Buchner's 20 saying. 21 Q. Is that a fair characterization of 22 your testimony? 23 A. What?</p>

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<p style="text-align: right;">Page 50</p> <p>1 Q. I'll re-ask it.</p> <p>2 A. Yeah.</p> <p>3 Q. So we've already agreed that</p> <p>4 another expert could not use your HVE data that</p> <p>5 you produced to re-create or test your original</p> <p>6 simulation?</p> <p>7 A. No, we have not.</p> <p>8 Q. Okay. But then you alluded to,</p> <p>9 well, they could have read my deposition and</p> <p>10 ignored the HVE data and just listened to what</p> <p>11 I said in the deposition and they could have</p> <p>12 reproduced it or tested it that way?</p> <p>13 A. I'm sorry, sir. The answer to the</p> <p>14 previous question was no, we have not agreed to</p> <p>15 that. You could --</p> <p>16 Q. Okay.</p> <p>17 A. Yeah. You could do a reasonable</p> <p>18 rerun of the data we gave and understand you're</p> <p>19 going to get a very similar answer to what we</p> <p>20 got. But they're not going to be as accurate</p> <p>21 as they need to be so that what's in my report</p> <p>22 would be precisely produced. But you could get</p> <p>23 a very similar answer. If you wanted to do it</p>	<p style="text-align: right;">Page 52</p> <p>1 A. No. The -- all of the data was</p> <p>2 already in my deposition and in my files.</p> <p>3 There really isn't anything -- I did exactly</p> <p>4 what I said in the -- in the amended, I did</p> <p>5 what I said I had done or would do in my</p> <p>6 deposition to run a simulation. So we followed</p> <p>7 what I said in my deposition as -- as the way,</p> <p>8 you know, that we wanted to do the work. And</p> <p>9 then we followed that script to produce this.</p> <p>10 We did make -- as I already said, there was</p> <p>11 a 0.04 inches or something tire diameter</p> <p>12 discrepancy or maybe 0.45 inches that we did</p> <p>13 correct.</p> <p>14 Q. Well, we'll talk about your</p> <p>15 changes to -- in your amended simulation in a</p> <p>16 minute. With regard to your original HVE</p> <p>17 simulation, what version of the HVE software</p> <p>18 did you use? Do you know?</p> <p>19 A. Yeah. 17, I believe. Let me look</p> <p>20 and see. I don't -- I don't have the original</p> <p>21 report. Let me see if I can find that. Yeah.</p> <p>22 17 on both of them.</p> <p>23 Q. And when you say both of them, you</p>
<p style="text-align: right;">Page 51</p> <p>1 as precise as I would like to have it done, you</p> <p>2 would want to read the deposition and use what</p> <p>3 I said in the deposition, yes.</p> <p>4 We'd like to be accurate. We'd like to have</p> <p>5 the right amount of detail. But someone could</p> <p>6 put in the data we have and they would -- they</p> <p>7 would get a reasonable result of what we got.</p> <p>8 It just wouldn't be the same results that were</p> <p>9 in my FR26 report. But they would be close.</p> <p>10 So as I said earlier, to do what we did, anyone</p> <p>11 else who wanted to do it would have to -- to</p> <p>12 get it as accurate as we would like for it to</p> <p>13 be, not just accurate enough to understand the</p> <p>14 work, but accurate so that my FR26 report in my</p> <p>15 deposition was accurate, you'd need to use --</p> <p>16 use what I said I did in my deposition and the</p> <p>17 supporting data.</p> <p>18 Q. All right. And you would need the</p> <p>19 supporting data that you produced with your</p> <p>20 FR26 amended report --</p> <p>21 A. No.</p> <p>22 Q. -- to get it as accurately as you</p> <p>23 wanted to do it?</p>	<p style="text-align: right;">Page 53</p> <p>1 mean the rerun report, which is reflected in</p> <p>2 your -- the May 8 printout of 2024?</p> <p>3 A. Right.</p> <p>4 Q. Okay. You don't know when that</p> <p>5 was run, but you know it was -- it was run</p> <p>6 using the 17.00 version of the software?</p> <p>7 A. Right. Because it says that at</p> <p>8 the top.</p> <p>9 Q. Right. And it says 2021. Is that</p> <p>10 the year that that version came out?</p> <p>11 A. Yes.</p> <p>12 Q. Okay. And do you know whether</p> <p>13 there's been any updates or new versions to the</p> <p>14 HVE software since?</p> <p>15 A. Yes. Yeah. There was -- there</p> <p>16 have been updates. We actually have a more</p> <p>17 current version. We're trying to stick with</p> <p>18 the version when we started working on the file</p> <p>19 that we had opened. So we -- it can be rerun</p> <p>20 on a new version if somebody wants to.</p> <p>21 Q. All right. So you actually</p> <p>22 possess a more current version than version</p> <p>23 17.00?</p>

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<p>1 A. Yes. Our --</p> <p>2 Q. What is the -- sorry.</p> <p>3 A. We -- we get subscription updates</p> <p>4 from HVE, yes. We have a more current version.</p> <p>5 Q. What's the most current version</p> <p>6 that you have now? Do you know?</p> <p>7 A. I don't know the number on it.</p> <p>8 No, sir.</p> <p>9 Q. All right. When you ran the</p> <p>10 original simulation, do you know the date that</p> <p>11 it was run?</p> <p>12 A. On or about October 12, a little</p> <p>13 bit before.</p> <p>14 Q. Of 2023. Correct?</p> <p>15 A. Yes.</p> <p>16 Q. And do you know whether at that</p> <p>17 time the most current version of HVE was</p> <p>18 version 17.00?</p> <p>19 A. It was not. We had started on</p> <p>20 version 17. We -- we got an update. As I went</p> <p>21 back and figured out through this process, we</p> <p>22 had a more current version. But we had started</p> <p>23 the process with 17, and we -- we kept it on 17</p>	<p>1 the most current version of the software that</p> <p>2 you possess?</p> <p>3 A. Probably because we were trying to</p> <p>4 reproduce the prior work. And that was the</p> <p>5 version we -- we had up and were using. If</p> <p>6 someone wants to do it on a later version, I'm</p> <p>7 happy to go do it. But I don't -- it's not</p> <p>8 going to change any of the answers -- any of</p> <p>9 the opinions because there haven't been any --</p> <p>10 but that was -- we were just trying to be</p> <p>11 consistent.</p> <p>12 We always try to be consistent when we start</p> <p>13 a project because when you adjust the versions,</p> <p>14 some program may adjust some of your data. And</p> <p>15 that can cause some issues. So it's just an</p> <p>16 engineering habit we have, and we stayed with</p> <p>17 it.</p> <p>18 Q. Wouldn't the most current version</p> <p>19 of the software have included improvements in</p> <p>20 the software that would give you the most</p> <p>21 reliable result?</p> <p>22 A. Well, that's wishful thinking. We</p> <p>23 don't know. It's not -- not necessarily known.</p>
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<p>1 just for consistency. But yeah, we did have a</p> <p>2 more current version at the time. I think I</p> <p>3 misspoke in my depo on that.</p> <p>4 Q. You misspoke in your prior</p> <p>5 deposition about that. Is that what you said?</p> <p>6 A. Yes.</p> <p>7 Q. All right. And so when you say</p> <p>8 you started the process, what do you mean by</p> <p>9 that?</p> <p>10 A. Well, it takes a while to do a</p> <p>11 simulation. So whatever -- when we -- when</p> <p>12 the -- when the work was started, 17 was open.</p> <p>13 Whether -- why it was open, I don't know. But</p> <p>14 that was the one that we started the process</p> <p>15 with. And once we start a version, we tend to</p> <p>16 stay with that version. And that's what</p> <p>17 happened here.</p> <p>18 It doesn't mean that there weren't more</p> <p>19 available versions. But that one -- that was</p> <p>20 the one that was used. And so we just stayed</p> <p>21 consistent with it. So we're consistent with</p> <p>22 it to this day.</p> <p>23 Q. Why would you not run the rerun on</p>	<p>1 If the program wasn't good enough in version</p> <p>2 17, they would have let us know that version</p> <p>3 17, don't use it. But -- and you don't even</p> <p>4 know -- it's got so many manuals, you don't</p> <p>5 know what the changes were. I'm don't -- I'm</p> <p>6 not -- I can't agree with that as we sit here.</p> <p>7 No, sir.</p> <p>8 Q. Well, do you -- when you say --</p> <p>9 when did the process start prior to October of</p> <p>10 2023? You say it takes a long time. How long?</p> <p>11 How long were you working on this before you</p> <p>12 created the simulation -- the original</p> <p>13 simulation?</p> <p>14 A. I don't know. I don't know. And</p> <p>15 I don't know that version 17 was the most</p> <p>16 updated one when we started. But once we</p> <p>17 start, we stay with it.</p> <p>18 Q. Well, you said you had to start</p> <p>19 the rerun from scratch basically because the</p> <p>20 old data was not the correct data. Right?</p> <p>21 A. Right. We -- right. We basically</p> <p>22 had to reenter it. Yes, sir.</p> <p>23 Q. All right. And you didn't start</p>

15 (Pages 54 - 57)

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<p style="text-align: right;">Page 58</p> <p>1 that rerun process for, you said months after 2 your deposition? 3 A. Yes. 4 Q. All right. So your deposition was 5 at the end of January. So you have February 6 and March. As best you can recall, you haven't 7 discovered the problem with the original 8 simulation. And then sometime after those two 9 months between then and May 8, you run the 10 rerun. Correct? 11 A. Similar, yes, sir. 12 Q. And you run it from scratch? 13 A. Yes. 14 Q. All right. So that's a month to 15 six weeks worth of time to run a simulation 16 from scratch. Correct? 17 A. I can't agree on the dates. I've 18 already told you that. But yeah, there was 19 time to run it from scratch. 20 Q. All right. And are you aware that 21 between August of 2021 when version 17 came out 22 and February of 2023, which was seven months 23 prior to your original simulation, there had</p>	<p style="text-align: right;">Page 60</p> <p>1 would be using the latest version because we -- 2 we have the latest version. 3 Q. Well, that was my question. That 4 was exactly my question. If you opened a 5 case -- a new case today, what version of HVE 6 would you use? 7 A. Well, we'd probably use whatever 8 version was opening at that time on that 9 computer. I would anticipate we would use the 10 latest version, just like I said in my 11 deposition. 12 Q. All right. 13 A. But if -- if the file was already 14 functioning, we would -- you know, we'd make a 15 decision based on the situation of the file. 16 But I was -- I was trying to stay with what we 17 had originally done to be as consistent as 18 possible with what we had originally done. I 19 understand you want to argue there's a 20 different idea. 21 I don't have any problem with it. Somebody 22 can take our data and rerun it on version -- 23 whatever they want. 12 if they want.</p>
<p style="text-align: right;">Page 59</p> <p>1 been -- three new versions of HVE had come out? 2 A. I don't know the number. No, sir. 3 Q. All right. You can't dispute that 4 though? 5 A. I'm not trying to dispute it. No, 6 sir. 7 Q. All right. And since February of 8 2023 up until the time of your running of the 9 rerun, there is an additional version of HVE 10 that's come out. Were you aware of that? 11 A. Well, I know we have -- I know 12 there -- I know there is a version that we 13 could have used as the new version, yes. I 14 don't know the dates of all the versions. No, 15 sir. 16 Q. All right. When you start a case 17 from scratch now that you want to use HVE, 18 which -- which version do you use? 19 A. 17. 20 Q. So you're still using 17 for all 21 your cases even though you possess a more 22 current version of HVE? 23 A. No. If we opened a case today, we</p>	<p style="text-align: right;">Page 61</p> <p>1 Q. All right. 2 MR. HILL: We've been going a 3 little over an hour. Want to take a -- I need 4 a restroom break. And please let me know if 5 you need a break obviously. 6 THE WITNESS: Yeah. 7 MR. HILL: This would be a good 8 time. 9 THE VIDEOGRAPHER: The time -- the 10 time is 11:13 a.m. We're off the video record. 11 (A break was taken.) 12 THE VIDEOGRAPHER: The time is 13 11:28 a.m. We're back on the video record. 14 MR. HILL: Thanks. 15 Q. (Mr. Hill) Hold on. I'm having an 16 issue sharing my screen. 17 A. I can see your screen. Yes, sir. 18 Q. Okay. Great. All right. Up on 19 the screen is that FR26 amended report. And I 20 want to move now to the sections where you 21 discuss the comparison between the initial 22 simulation and the rerun simulation. And as I 23 understand your report, with the rerun you</p>

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<p style="text-align: right;">Page 62</p> <p>1 were -- you used for the F-250, the default 2 properties for -- for stiffness coefficients 3 that were within the software, the 4 Vehiclemetrics database. Is that correct? 5 A. Yes. 6 Q. And is the Vehiclemetrics database 7 part of the HVE software? 8 A. No. Vehiclemetrics is an approved 9 vendor to do things like make vehicles for the 10 HVE software. 11 Q. How is the different from the 12 Neptune data that you used with the original 13 simulation? 14 A. You mean for crush stiffness? 15 Q. No. I don't mean the actual. How 16 is using Vehiclemetrics -- in other words, you 17 just said it was approved by HVE for use as a 18 method for determining the stiffness 19 coefficients. Is -- is Neptune not approved? 20 I'm trying to understand that. I thought 21 Vehiclemetrics was contained within the HVE 22 software. 23 A. Okay. HVE has vehicles that come</p>	<p style="text-align: right;">Page 64</p> <p>1 stronger and stiffer. 2 So you know, that would be to the Escape's 3 disadvantage. We hit it the a stronger truck 4 in the rerun -- I mean a stronger simulated 5 truck. 6 So that's -- that's -- I thought that would 7 be most consistent with my deposition and the 8 most consistent with my intent, especially 9 because we had done the calculations of crush 10 originally with the hand calculations or the 11 computer calculations with -- with Neptune's 12 data. Now we were going to use the pure 13 simulation data or as pure as we could get. 14 Q. And why didn't you follow that 15 same process with the original simulation? 16 A. Because I asked if we had crush 17 stiffness coefficients for the Crew Cab. And 18 the answer was no. And I didn't realize when 19 Vehiclemetrics provided a vehicle, they -- they 20 provided stiffness coefficients as well, the 21 numbers side. 22 So in the rerun when we were making sure to 23 do things per my deposition, we went through it</p>
<p style="text-align: right;">Page 63</p> <p>1 in it. 2 Q. Right. 3 A. HVE had an F-250, but it was not 4 the Crew Cab. It was an Extended Cab, I 5 believe. So it's essentially the same vehicle, 6 but a little bit -- the weight is going to be a 7 little bit different. The length will be a 8 little bit different. And we wanted a 9 Crew Cab. 10 So Vehiclemetrics is a vendor for HVE that 11 we contracted with to make us the right shape 12 Crew Cab from our scans. We gave them the 13 scan, and they made the right shape Crew Cab. 14 And -- and with that vehicle from them came 15 crush stiffness coefficients. 16 Their crush stiffness coefficients were 17 higher than Neptune's. I think Neptune's were 18 reasonable. Vehiclemetrics, because they 19 provided some -- I didn't realize they had -- 20 that's closer to using the defaults of HVE than 21 Neptune. So I -- in the update we used them. 22 And to be clear, they're higher crush stiffness 23 coefficients. So the F-250 in the rerun was</p>	<p style="text-align: right;">Page 65</p> <p>1 and said, okay, I would use defaults if they 2 were there. This vehicle has defaults. We're 3 going to use those because that's what I said 4 we would do. 5 Q. So were you told by Jacob or 6 whoever was running the test the first time 7 that there was -- there were no default values 8 for an F-250 in the HVE system? 9 A. To an extent, yes. I asked for 10 the Crew Cab, and he said no. So I didn't 11 think there were. I didn't ask for Vehicle -- 12 Vehiclemetrics to ultimately provide it. I 13 asked the question -- I think I got the 14 question -- the correct answer to my question. 15 I think I just misunderstood that it applied -- 16 that it only applied to -- the HVE has we 17 opened it, it didn't have them. 18 I don't think that I asked the question did 19 it come with Vehiclemetrics. So just a 20 communication error. 21 Q. All right. So back when you ran 22 the original simulation, you could have 23 followed the process that you followed with the</p>

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<p style="text-align: right;">Page 66</p> <p>1 rerun? There's nothing new about that. It's 2 just you didn't recognize that that was a 3 possibility when you did the original run? 4 A. Right. Right. 5 Q. Vehiclemetrics and the process you 6 followed was available back in October of 2023? 7 A. Yes. Yes. And we had it. We had 8 the vehicle. We had it in there. We just 9 didn't use the AV values that came with the 10 truck because I mistakenly didn't think they'd 11 come with some. 12 Q. All right. It appears another 13 change that was made is to the tire sizes on 14 the F-250. Explain the change you made between 15 the original run and the amended run with 16 regard to the tire sizes on the F-250. 17 A. Sure. We have the tire sizes 18 right in the file as a whole. But when we ran 19 the simulation, the tire size -- I don't see 20 the paragraph in there. Can you -- do you have 21 it? 22 Q. It's -- 23 A. Oh, yeah. Yeah. So there was a</p>	<p style="text-align: right;">Page 68</p> <p>1 and pointed it out. So it was in the data that 2 we provided. I don't know where it is in 3 the -- in the data as we sit here. My memory 4 doesn't go back that far. But the -- so it's 5 in the data we provided, whether it's in one of 6 the reports or printouts. 7 Q. But we've -- we've already 8 established that the data you provided, you 9 can't verify whether it correlates to your 10 simulation -- original simulation or not. 11 A. You could be right on that. The 12 one that -- the one that I wrote the report on 13 may have actually had the right size in it. 14 But in the -- in what we provided, it looked 15 wrong. So we made sure it was right in the 16 rerun. 17 Whether or not the data we provided was 18 actually about the simulation that I used to 19 right the report or not, well, that's a great 20 point you made. But whatever data we had 21 available, it looked like the tire size was 22 wrong. So we made sure we got the tire size 23 right in the rerun because that was our whole</p>
<p style="text-align: right;">Page 67</p> <p>1 point -- a 0.35 inches difference in the tire 2 size that -- 0.7 in the diameter and 0.35 3 inches in the -- in the radius. So we were off 4 by, you know, a third of an inch in height. 5 And I think that was corrected. In fact, I 6 know it was corrected. 7 Q. And that's not based on any new 8 information. Right? I mean, the tire size on 9 the subject F-250 was known at the time you ran 10 your original simulation? 11 A. Right. We -- we had done it -- we 12 used the right tire size throughout most of the 13 file, but just in inputting the data in the 14 simulation, it didn't -- we didn't catch that 15 we should change the size of the tire by 16 that -- you know, by that much. 17 Q. If you don't know what original 18 data was used for the original simulation 19 because you don't have it anymore, how do -- 20 how do you know what was or wasn't used with 21 the original simulation? 22 A. Well, I don't remember where it 23 is. But Mr. Grimes is the one that located it</p>	<p style="text-align: right;">Page 69</p> <p>1 intent. We just wanted to get it right. 2 Q. Hold on one second. Just real 3 quickly while we're talking about HVE data 4 reports, have you seen a screen like what's up 5 there now from HVE? 6 A. I -- I can't read it. It's small. 7 Q. All right. This is a graphical 8 representation of crush from an HVE run. Have 9 you -- 10 A. No. We -- we only see a list of 11 files. At least I only see a list of files. 12 Q. So you've never seen a 13 depiction -- 14 MS. CANNELLA: Rick, we see your 15 e-mail, I think. 16 MR. HILL: You see my e-mail? 17 MS. CANNELLA: Yeah. 18 MR. HILL: I think I shared the 19 wrong screen. 20 MS. CANNELLA: Yeah. 21 A. I couldn't read it, so there's, 22 you know, no harm no foul. 23 Q. There's nothing in there important</p>

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<p style="text-align: right;">Page 70</p> <p>1 anyways. All right. How about now?</p> <p>2 A. Yes.</p> <p>3 Q. All right. So have you seen this</p> <p>4 type of output from an HVE simulation?</p> <p>5 A. I don't know if I've seen it</p> <p>6 exactly like that. But I've seen something</p> <p>7 similar.</p> <p>8 Q. All right. And did you create</p> <p>9 anything like this based upon your rerun</p> <p>10 simulation?</p> <p>11 A. No. Yeah, we have the image of</p> <p>12 the vehicle. And we also have the crush. But</p> <p>13 it's not compiled like that, no. But we</p> <p>14 have -- we have the same information in --</p> <p>15 in -- compartmentalized though.</p> <p>16 MS. CANNELLA: One moment. What</p> <p>17 are we looking at right now? Is this from our</p> <p>18 wreck?</p> <p>19 MR. HILL: No. This is a</p> <p>20 representative of -- of an HVE output, a form</p> <p>21 of HVE showing the data from a simulation. So</p> <p>22 I'm just asking him generically has he seen</p> <p>23 something like this for any of the simulations</p>	<p style="text-align: right;">Page 72</p> <p>1 MS. CANNELLA: -- for Defense?</p> <p>2 MR. HILL: No. That's just a</p> <p>3 random simulation showing a type of data. And</p> <p>4 certainly if I want to just get a sample of</p> <p>5 what HVE outputs are like, I can do that.</p> <p>6 That's all that is. It's a representation</p> <p>7 sample of the type of data HVE can put out.</p> <p>8 MS. CANNELLA: Okay. Well, we</p> <p>9 want to get whatever communication that came</p> <p>10 from and whatever file that came from as well.</p> <p>11 MR. HILL: Sure. All right.</p> <p>12 Q. (Mr. Hill) You produced what's on</p> <p>13 the screen now as 9376. It's a graphical</p> <p>14 representation of the crush on the Escape in</p> <p>15 your rerun simulation. Is that what's depicted</p> <p>16 on 9376?</p> <p>17 A. That's part of it, yes.</p> <p>18 Q. Okay. And was that generated by</p> <p>19 HVE or was that generated by you using the HVE</p> <p>20 data?</p> <p>21 A. That's HVE.</p> <p>22 Q. Okay. So HVE creates this --</p> <p>23 A. Yes.</p>
<p style="text-align: right;">Page 71</p> <p>1 he's run.</p> <p>2 MS. CANNELLA: This is -- we</p> <p>3 haven't produced this. No simulation has been</p> <p>4 produced to us of our wreck. This is our Ford</p> <p>5 Escape with a similar crush profile. So why</p> <p>6 haven't we seen this before?</p> <p>7 MR. HILL: This is just a sample.</p> <p>8 This is not -- this is a sample HVE output from</p> <p>9 just a random run. I'm just asking if he's</p> <p>10 seen this type of presentation. That's it.</p> <p>11 MS. CANNELLA: But this is -- no,</p> <p>12 this is -- this is our crash. This is our</p> <p>13 crash right here.</p> <p>14 MR. HILL: Right. This is just a</p> <p>15 sample. This is not our crash. I can</p> <p>16 represent that to you. It's not our crash.</p> <p>17 It's nothing -- it is nothing. It's just a</p> <p>18 sample. I'm just saying if he's ever had a</p> <p>19 representation or seen this type of</p> <p>20 information. Because if you look at --</p> <p>21 MS. CANNELLA: Has somebody done a</p> <p>22 simulation of our crash --</p> <p>23 MR. HILL: No.</p>	<p style="text-align: right;">Page 73</p> <p>1 Q. -- from the simulation?</p> <p>2 A. Yes.</p> <p>3 Q. Okay. And are you aware of</p> <p>4 whether it can create any other graphical</p> <p>5 depictions of crush from a simulation?</p> <p>6 A. Well, you can rotate it and look</p> <p>7 at it in different ways, yes. That was -- we</p> <p>8 wanted a representative one. If somebody wants</p> <p>9 more, I guess they can rerun it and do it. But</p> <p>10 this is -- we wanted an output so you could see</p> <p>11 what the car looked like. And the best way to</p> <p>12 do it is this.</p> <p>13 Q. Right. All right. Do you choose</p> <p>14 like what, like, HVE is going to -- what side</p> <p>15 it's going to show or how it's going to display</p> <p>16 this? I mean, is there other options? How</p> <p>17 does it work?</p> <p>18 A. I think you can rotate it and</p> <p>19 choose the image you want, yes. So this is --</p> <p>20 this is -- I like a perspective, a 3D</p> <p>21 perspective so you can see it. It's</p> <p>22 representative of the numbers that are in the</p> <p>23 reports above this. So this is the one that I</p>

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<p style="text-align: right;">Page 74</p> <p>1 chose, yes.</p> <p>2 Q. Right. All right. The documents</p> <p>3 in appendix B, do they contain all of the HVE</p> <p>4 files that were generated when you ran the</p> <p>5 rerun simulation?</p> <p>6 A. They were -- they're the reports</p> <p>7 that HVE provided for the rerun simulation.</p> <p>8 The file is a -- this is a PDF. The file is an</p> <p>9 electronic copy of the file that was provided</p> <p>10 with the report.</p> <p>11 Q. Right. So this is a printout of</p> <p>12 the PDF of the results from the test, the</p> <p>13 reports?</p> <p>14 A. Yes.</p> <p>15 Q. And you have the electronic files</p> <p>16 used to generate this -- these reports?</p> <p>17 A. Yes. It was provided with the</p> <p>18 report.</p> <p>19 Q. Okay. All right. Going back to</p> <p>20 the vehicles used in the simulation, you talk</p> <p>21 about the F-250 that was in the volume</p> <p>22 metrics -- the Vehiclemetrics database was a</p> <p>23 regular cab body style. Our subject truck was</p>	<p style="text-align: right;">Page 76</p> <p>1 So we've had that since, you know, October of</p> <p>2 last year, and that's what we used.</p> <p>3 Q. I'm saying you used the Neptune</p> <p>4 data in the original simulation. So was it for</p> <p>5 a Crew Cab or a cab body style?</p> <p>6 A. I'd have to look and see. I</p> <p>7 didn't understand that that's what you were</p> <p>8 asking about. We have that in the</p> <p>9 calculations. We have the printout right here</p> <p>10 if I can take a minute to find it.</p> <p>11 All right. It's a Super Crew four-door. So</p> <p>12 we had a Crew -- the Neptune data that was</p> <p>13 used in our crush calculations -- because we've</p> <p>14 done two things, crush calculations and a crush</p> <p>15 simulation. The crush calculations were a</p> <p>16 Super Duty Crew. And the original one was the</p> <p>17 Super Duty Crew with Neptune.</p> <p>18 Q. Okay. And we have a Super Duty</p> <p>19 Crew in the accident?</p> <p>20 A. Yes.</p> <p>21 Q. Yeah. Okay. All right. On this</p> <p>22 page I have up here, you're talking about the</p> <p>23 bumper height that you used for the F-250 in</p>
<p style="text-align: right;">Page 75</p> <p>1 a Crew Cab. And so you used a modeling partner</p> <p>2 to convert to a Crew Cab. Is that a</p> <p>3 layperson's way to describe that?</p> <p>4 A. Yes. The modeling partner we used</p> <p>5 was Vehiclemetrics. It's a typo and it says</p> <p>6 Baker Sneddon. That was -- that was -- it was</p> <p>7 Vehiclemetrics. Everything came from</p> <p>8 Vehiclemetrics in the first part of this</p> <p>9 section. I don't know why it was typed</p> <p>10 Baker Sneddon. That's a mistake.</p> <p>11 Q. That was my question. I didn't</p> <p>12 understand what that -- so that sentence</p> <p>13 shouldn't be in this?</p> <p>14 A. The sentence should be. But the</p> <p>15 modeling partner should be Vehiclemetrics.</p> <p>16 Q. All right. Gotcha. And when you</p> <p>17 did the original simulation, was there a</p> <p>18 transfer from -- I mean, how did you account</p> <p>19 for it being a Crew Cab in the actual accident?</p> <p>20 A. Well, the original we used</p> <p>21 Vehiclemetrics. We had them do exactly what</p> <p>22 was said here. Regular cab geometry was</p> <p>23 replaced with a scan-based Crew Cab geometry.</p>	<p style="text-align: right;">Page 77</p> <p>1 the rerun simulation. And I believe you agree</p> <p>2 that it was 29 inches and that that was</p> <p>3 verified through measuring both the exemplar</p> <p>4 truck that you had and the measurement of the</p> <p>5 crash test F-250 used in the Defense crash</p> <p>6 testing and that they were all consistent. Is</p> <p>7 that correct?</p> <p>8 A. Reasonably. They're never</p> <p>9 perfect. But yeah, they're all approximately</p> <p>10 29 inches.</p> <p>11 Q. Okay. So you don't have any issue</p> <p>12 with the height of the crash test F-250 as</p> <p>13 tested?</p> <p>14 A. No.</p> <p>15 Q. Okay. The vehicle you used in the</p> <p>16 rerun simulation for the Escape, it doesn't</p> <p>17 appear like you made any changes to that in</p> <p>18 comparison to your original run. Is that</p> <p>19 correct?</p> <p>20 A. Correct.</p> <p>21 Q. Okay. And so the only</p> <p>22 modifications we have to either vehicle are</p> <p>23 what we've already talked about for the F-250.</p>

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<p style="text-align: right;">Page 78</p> <p>1 You used a different default coefficient</p> <p>2 stiffness because you used the Vehiclemetrics</p> <p>3 instead of Neptune. Right?</p> <p>4 A. Yes.</p> <p>5 Q. You changed the tire sizes to</p> <p>6 mirror the subject F-250. For the Escape you</p> <p>7 didn't make any changes compared to the</p> <p>8 original run?</p> <p>9 A. Correct.</p> <p>10 Q. All right. And so the only real</p> <p>11 modifications beyond those would be to the</p> <p>12 weight of the vehicle. Right?</p> <p>13 A. Seemingly.</p> <p>14 Q. Right. And so here we have</p> <p>15 appendix A, which I believe is your -- showing</p> <p>16 how you determined the weight used in the</p> <p>17 simulation for both vehicles?</p> <p>18 A. Yes.</p> <p>19 Q. Okay. Here is the F-250 first.</p> <p>20 And the first weight I see here, weight 250</p> <p>21 equals 8,040 pounds. I'm assuming that is the</p> <p>22 weight of the crash vehicle that you weighed</p> <p>23 after the crash?</p>	<p style="text-align: right;">Page 80</p> <p>1 normally just redistribute the weight ratios,</p> <p>2 if we do it at all.</p> <p>3 Q. Okay. In this case did you</p> <p>4 redistribute the weight ratios?</p> <p>5 A. No, we did not. We just added the</p> <p>6 weights to the vehicle at the CG.</p> <p>7 Q. All right. So there was no</p> <p>8 factoring in the specific location of the items</p> <p>9 in the truck; it was -- you didn't use that as</p> <p>10 part of your rerun simulation?</p> <p>11 A. Correct.</p> <p>12 Q. Okay. Did you account for any</p> <p>13 loss of fluids that the F-250 may have suffered</p> <p>14 in the crash?</p> <p>15 A. No.</p> <p>16 Q. Okay. Do you know the level of</p> <p>17 fuel in the gas tank of the F-250 at the time</p> <p>18 it was measured?</p> <p>19 A. Not specifically. Just what was</p> <p>20 in there. It's part of the 8,040. We know the</p> <p>21 weight of it. But you know, not an exact</p> <p>22 amount.</p> <p>23 Q. You don't know if the tank was</p>
<p style="text-align: right;">Page 79</p> <p>1 A. Yes.</p> <p>2 Q. Okay. And then you added weight</p> <p>3 for the driver and certain items that were on</p> <p>4 the F-250?</p> <p>5 A. Yes.</p> <p>6 Q. Okay. And that gave you a total</p> <p>7 weight that's highlighted here that was used</p> <p>8 for the total weight in the simulation?</p> <p>9 A. Yes.</p> <p>10 Q. Okay. Does HVE allow you to</p> <p>11 account for the position of these additional</p> <p>12 weights? In other words, does it -- do you put</p> <p>13 in the location of the driver and add 170</p> <p>14 pounds in the driver's seat or is it just a</p> <p>15 total weight that's input into the software?</p> <p>16 A. You can do it either way.</p> <p>17 Q. Okay. So it does allow you to</p> <p>18 actually position weight within the vehicle in</p> <p>19 a specific location?</p> <p>20 A. Well, generally the way we do it</p> <p>21 is we would redistribute the weight ratios. So</p> <p>22 I believe in the past we've actually put actual</p> <p>23 weights in like occupants and things. But we</p>	<p style="text-align: right;">Page 81</p> <p>1 full, empty? You don't know what fuel level</p> <p>2 was in the tank at the time it was weighed?</p> <p>3 A. Just what it was after the</p> <p>4 accident. There's no evidence it leaked out.</p> <p>5 Q. And the same with regard to</p> <p>6 whatever fluid was in the radiator, that wasn't</p> <p>7 accounted for?</p> <p>8 A. Yeah, the radiator did leak some</p> <p>9 out. We know that. But no, we did not think</p> <p>10 that was --</p> <p>11 Q. (Inaudible) fluids contained</p> <p>12 within the vehicle?</p> <p>13 A. Pardon?</p> <p>14 Q. And you didn't account for any</p> <p>15 other loss of fluids from the vehicle?</p> <p>16 A. No. We knew some radiator fluid</p> <p>17 had leaked out. We weren't worried about that.</p> <p>18 The rest of the fluid should have been the same</p> <p>19 at the time of the accident.</p> <p>20 Q. All right. And the weight for the</p> <p>21 chainsaw, did you actually measure the</p> <p>22 chainsaw? Did you weigh it?</p> <p>23 A. No. We didn't have the chainsaw.</p>

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<p style="text-align: right;">Page 82</p> <p>1 So you had to look something up. It's an Stihl 2 chainsaw, so you had to look something up for 3 the original. 4 Q. Same -- same question for the 5 tools. Is that based upon measuring the weight 6 of the tools, or is that just an estimation? 7 A. Nobody knows what was in the 8 toolbox. We needed a weight to put in. So we 9 thought 100 would be reasonable. We don't know 10 exactly what it is. Nobody has ever seen 11 inside the toolbox. 12 Q. And what about the storage box, is 13 that an estimation or is that -- you didn't 14 actually weigh the storage box, did you? 15 A. No. It was missing. So I think 16 we did some internet research to come up with a 17 reasonable weight, just like Mr. Grimes did. 18 Q. All right. The bottom of the page 19 is the weight you used for the Ford Escape. In 20 your simulation, again I'm assuming that your 21 weight 3,410 is the measured weight of the 22 vehicle after the crash? 23 A. Yes, it is.</p>	<p style="text-align: right;">Page 84</p> <p>1 of questions about work that -- that could have 2 been discussed at his first deposition. 3 MR. HILL: That's fine. You can 4 lodge that -- lodge that objection. But this 5 was produced as part of his amended report. 6 MS. CANNELLA: I understand that. 7 But my -- my statement stands. 8 MR. HILL: All right. Well, I 9 disagree with your objection. 10 Q. (Mr. Hill) The Escape in the 11 accident suffered quite a bit of broken glass. 12 You would agree with that? 13 A. Yes. 14 Q. All right. Did you account for 15 the weight of the glass that was missing when 16 you weighed the crashed Escape? 17 A. Whatever glass -- normally it's 18 all shoveled up and thrown in the vehicle or it 19 falls in the vehicle. Whatever glass was in 20 there, it got accounted for. Whatever glass 21 wasn't in there didn't get accounted for. 22 Q. Okay. And do you know whether the 23 glass was actually -- the shards of glass was</p>
<p style="text-align: right;">Page 83</p> <p>1 Q. All right. And with the Escape, 2 did you add any weight for the cargo that was 3 behind the second row seat? 4 A. Well, it was already in the 5 vehicle when we weighed it, so -- 6 Q. All right. That -- 7 A. -- yes, it's in the weight. 8 Q. That's my question. So there 9 was -- the cargo was still in the back of the 10 Ford Escape at the time you weighed it? 11 A. Yes. 12 Q. Okay. Do you know the level of 13 the fuel tank in the Escape at the time you 14 weighed it? 15 A. Well, nothing leaked out at the 16 scene. So it was whatever it was at the time 17 of the accident. That's all we were concerned 18 about. 19 MS. CANNELLA: Mr. Hill, I'm 20 trying to give you some leeway here, but this 21 is not new information. And this is a 22 deposition on his supplemental report. So 23 we're not -- we're going to object to a bunch</p>	<p style="text-align: right;">Page 85</p> <p>1 put in the vehicle at the time you weighed it? 2 A. Well, some of it was. But I 3 don't -- I didn't account -- try and account 4 for each shard of glass. No, sir. It's -- the 5 weight of the vehicle is a reasonable 6 approximation in the condition it's shown in at 7 the time of our photographs. And we think 8 that's reasonable for the accident, plus the 9 occupants the car seats. 10 Q. And the same question with regard 11 to the placement of the weight. Just to be 12 clear, similar to the F-250 you didn't account 13 for the location of the occupants in the 14 vehicle when you ran the simulation? 15 A. Well, they're near the CG. But 16 no, we didn't. We just added their weight to 17 the total vehicle, yes. 18 Q. Okay. All right. Now we can -- 19 let's just confirm a few things that were not 20 changed between the original simulation and the 21 amended simulation. 22 Just to be clear, the offset that you used 23 in both simulations was twelve inches. Is that</p>

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<p style="text-align: right;">Page 86</p> <p>1 correct?</p> <p>2 A. Yes.</p> <p>3 Q. All right. And the speed --</p> <p>4 A. Time out. Pardon me. Pardon me.</p> <p>5 Q. Sure.</p> <p>6 A. You've actually made a really good</p> <p>7 point. And you did it a little while ago.</p> <p>8 I -- we know the offset is eleven inches</p> <p>9 from -- or approximately a foot. That's what I</p> <p>10 said in my first depo. But it's eleven from</p> <p>11 the Ford emblem marks on the tailgate.</p> <p>12 So in the original simulation, I don't</p> <p>13 know -- I believe it was -- I don't know if it</p> <p>14 was eleven inches or one foot. But in my depo</p> <p>15 I was asked what the offset was. I said, well,</p> <p>16 I haven't exactly measured it. And I made a</p> <p>17 measurement on a drawing, and it said one foot.</p> <p>18 So I'm going to use one foot because that's</p> <p>19 consistent with my deposition. But the</p> <p>20 precise -- you made a good point earlier. I</p> <p>21 don't know the precise offset that was used</p> <p>22 other than from my memory it could have been</p> <p>23 eleven inches or a foot.</p>	<p style="text-align: right;">Page 88</p> <p>1 used a foot because I -- I wanted to do it</p> <p>2 exactly from my depo. And that's a -- that's</p> <p>3 an advantage to the F-250. That would produce</p> <p>4 more crush.</p> <p>5 So it keeps my analysis conservative, which</p> <p>6 is fine. And I'm not worried about an inch</p> <p>7 left or right, up or down.</p> <p>8 Q. All right. And you used a speed</p> <p>9 of 51 miles per hour for the F-250?</p> <p>10 A. Yes.</p> <p>11 Q. And you have said repeatedly</p> <p>12 throughout your initial deposition and then now</p> <p>13 in this report that the speed of the F-250 at</p> <p>14 the time of the accident was 51 miles per hour.</p> <p>15 Correct?</p> <p>16 A. That's my best number. Yes, sir.</p> <p>17 Q. All right. I know it hasn't been</p> <p>18 a full hour, but I need another break. So</p> <p>19 let's just take a five-minute break. What do</p> <p>20 you want to do about lunch, Mr. Buchner? I</p> <p>21 don't want to make you work through lunch, but</p> <p>22 it's up to you.</p> <p>23 A. I'll cry when I need lunch. Right</p>
<p style="text-align: right;">Page 87</p> <p>1 But it was -- it was -- it was done from the</p> <p>2 scan data we had and everything. And so it's</p> <p>3 approximately a foot. And that's what we used.</p> <p>4 I don't know why I thought I needed to clarify</p> <p>5 all of that. But thank you for listening.</p> <p>6 Q. Sure. But regardless, the offset</p> <p>7 you used in the rerun was twelve inches to the</p> <p>8 left of the Escape?</p> <p>9 A. Thank you. Yes.</p> <p>10 Q. Right. And -- and there's no</p> <p>11 dispute that that's the offset that you believe</p> <p>12 occurred, in fact?</p> <p>13 A. Well, I actually think it's eleven</p> <p>14 from the -- in the depo I did an approximate</p> <p>15 using a -- a manual scale. But we know where</p> <p>16 the -- we know it's precisely eleven if we go</p> <p>17 to the best data we have.</p> <p>18 Q. All right. So why did you use</p> <p>19 twelve if you now have determined that it was</p> <p>20 eleven?</p> <p>21 A. Because I -- earlier we were using</p> <p>22 the orientation from the scans, which was</p> <p>23 eleven. But in the depo I said one foot, so we</p>	<p style="text-align: right;">Page 89</p> <p>1 now I don't need lunch.</p> <p>2 Q. All right.</p> <p>3 MR. HILL: Well, let's just take a</p> <p>4 quick five-minute break.</p> <p>5 THE WITNESS: Thank you.</p> <p>6 MS. CANNELLA: Okay.</p> <p>7 THE VIDEOGRAPHER: The time -- the</p> <p>8 time is 12 o'clock p.m. We're off the video</p> <p>9 record.</p> <p>10 (A break was taken.)</p> <p>11 THE VIDEOGRAPHER: The time is</p> <p>12 12:15 p.m. We're back on the video record.</p> <p>13 MR. HILL: Thanks.</p> <p>14 Q. (Mr. Hill) The HVE parameters for</p> <p>15 the Escape that you used in the rerun</p> <p>16 simulation, they don't differentiate with</p> <p>17 regard to whether the Escape has a sunroof or</p> <p>18 doesn't have a sunroof. Correct?</p> <p>19 A. What are you asking?</p> <p>20 Q. Yeah. So you used a vehicle in</p> <p>21 your simulation for the Escape that you got</p> <p>22 from the Volume Metric's (sic) database.</p> <p>23 Correct?</p>

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<p style="text-align: right;">Page 90</p> <p>1 A. Well, from Engineering Dynamics. 2 It was in their database originally, yes. 3 Q. Right. In HVE's database? 4 A. Yes. 5 Q. And did that vehicle have a 6 sunroof that you used in your simulation? 7 A. It doesn't show a sunroof. 8 Q. Okay. And it doesn't 9 differentiate. You can't choose Escape with a 10 sunroof or Escape without a sunroof within the 11 HVE software? 12 A. HVE doesn't have a choice for with 13 or without sunroof. No. 14 Q. Okay. And so it doesn't consider 15 whether it has a sunroof or not in determining 16 its prediction of crush? 17 A. That would be up to the user to 18 consider whether or not, you know, that should 19 be included more than likely. But where the 20 crush is in the simulation we ran is the bumper 21 level. So as long as you go to bumper level 22 crush, I would say the sunroof would be not a 23 particular factor that the simulation could or</p>	<p style="text-align: right;">Page 92</p> <p>1 clearly shows is that the structure of the 2 vehicle itself would have produced less crush 3 if it were hit at the bumper level, which was 4 the intent of the run. 5 Q. Right. I'm just trying to 6 establish that in your simulation, you didn't 7 place any cargo in the back of the Escape used 8 in the simulation? 9 A. No, we did not. 10 Q. All right. Likewise you didn't 11 place a car seat in the Escape in the 12 simulation? 13 A. No. We were studying how the 14 Escape performed relative to a bumper level 15 contact. We wanted to study the structure of 16 the Escape. 17 Q. You're aware obviously that the 18 Defense performed a real-world crash test back 19 in May of 2023, and the crush that is seen on 20 the Escape in the real-world crash test is very 21 different from the crush seen in your rerun 22 simulation. You would agree with that? 23 A. No. Both produced what we -- what</p>
<p style="text-align: right;">Page 91</p> <p>1 could not include. But it doesn't mean that if 2 you were to -- in other words, say Mr. Grimes's 3 crash test, you would want to use the most 4 representative vehicle. In the HVE we use the 5 most representative vehicle. And sunroofs -- 6 I've never investigated presence or 7 non-presence on other vehicles. 8 But yeah, as far as HVE goes, it doesn't -- 9 to my knowledge, it's not including sunroofs in 10 its -- in what it has. 11 Q. And you did not modify the Escape 12 vehicle in your simulation to account for the 13 sunroof? 14 A. No. We were not modifying it, no. 15 We were attempting to use it, you know, as -- 16 as their default vehicle. That is correct. 17 Q. Okay. And the simulation also 18 does not allow you to place cargo within the 19 hatch of the Escape to determine whether that 20 will have any impact on the crush. Correct? 21 A. We don't think it has any impact. 22 No, sir. But if -- we don't think it did. The 23 intent wasn't to put it in there. But what it</p>	<p style="text-align: right;">Page 93</p> <p>1 is the critical factor in this case is that 2 they both produced -- demonstrated that 3 bumper-level impacts produce less crush than 4 override impacts. So we do have -- that's 5 really the only value of the test is to 6 demonstrate that there would not be any 7 override. That's what we're trying to do with 8 our simulation is that if you can hit the 9 bumper of a vehicle, then you -- then you end 10 up producing a much more favorable result as 11 far as the, you know, increasing forces and 12 able to decrease crush. But there are a lot of 13 differences beyond that that makes the crash 14 test not representative of our accident. 15 Q. Well, that's a separate question. 16 But let me start with this. How do you define 17 override? Let's make sure we understand that. 18 Do you define it as the bumper completely 19 misses the other bumper? Is that your 20 definition? 21 A. I don't have a definition. 22 There's an understanding -- there can be -- the 23 term doesn't have the exact definition in every</p>

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<p style="text-align: right;">Page 94</p> <p>1 crash. Every crash is slightly different. But 2 override typically discusses that the -- that 3 some part of one vehicle that's like the bumper 4 is overriding some part of the other vehicle. 5 In this case we're talking about the bumpers or 6 the bumper-level frames. 7 So yeah, that's -- that's what we're using 8 here. But it's -- you know, it needs to be 9 discussed openly, not -- it's not just one 10 definition that can be perfectly applied to 11 everything. 12 Q. Okay. So there's no one 13 definition of override in your opinion? 14 A. Well, there's one understanding of 15 it. But there's no one exact definition. If 16 you're teaching a class, you'd say it's when 17 one bumper goes over the top of another to get 18 the concept across. But we have a lot of 19 different vehicles that hit a lot of different 20 ways. So you have to look at each accident 21 somewhat uniquely. 22 Q. So when you say there was no 23 override in the exponent crash test, what --</p>	<p style="text-align: right;">Page 96</p> <p>1 Q. The measured crush in your 2 simulation is over 20 inches short of the 3 observed crush in the crash test. Would you 4 agree with that? 5 A. Well, are you saying someone 6 measured the crush in the crash test like 7 Mr. Grimes and published that? Because I 8 haven't seen that if he did. 9 Q. No. You overlaid it yourself in 10 comparing the two crushes. 11 A. Well, my intent wasn't to do 12 Grimes's work and provide measurements and 13 things. He didn't measure it. I'm just trying 14 to show that there's less crush visually 15 obviously between the crash test. So his 16 representation of the crash test is inaccurate. 17 Q. What about his representation of 18 the crash test is inaccurate? 19 A. Well, he claims there was more 20 crush. And then he changes that to the same 21 crush in his depo. So that's -- in our report 22 we just showed the two vehicles overlaid so 23 that anyone can make their own determination as</p>
<p style="text-align: right;">Page 95</p> <p>1 MS. CANNELLA: Sorry. 2 Mr. Buchner, were you done with your answer? 3 THE WITNESS: I was. Thank you. 4 Q. So when you say that there was no 5 override in the exponent crash testing, what do 6 you mean by that statement? 7 A. Well, the bumper -- the rear 8 bumper of the -- and the structure supporting 9 it specifically because the rear bumper did 10 shift some. But the frame rails of the unibody 11 of the Escape and -- on one side went into the 12 center of the bumper and stayed there 13 throughout the entire crash test. So we had 14 that bumper level was secure and the strong 15 structures were secure on the bumper of the 16 F-250 on the driver's side. And on the 17 passenger side F-250, the tow hook went into 18 the bumper and pushed it in. 19 So we maintained bumper-level, frame-level 20 engagement between the two vehicles throughout 21 the entirety of the crash pulse phase of the 22 accident. And the physical evidence concretely 23 shows that.</p>	<p style="text-align: right;">Page 97</p> <p>1 to the crush. 2 Q. All right. 3 A. He didn't -- he didn't do that. 4 He said he visually saw it. But he didn't 5 provide any evidence of it. So we just 6 provided visual evidence of it. 7 Q. Well, we have photographs of the 8 crash test vehicles. 9 A. Visual evidence. 10 Q. Right. And have you requested to 11 inspect the crash test vehicles? 12 A. No. 13 Q. Has anyone from Rough Country ever 14 prevented you from inspecting the crash test 15 vehicles? 16 A. I mean, I've never talked to 17 Rough Country, so I don't know. 18 Q. Any lawyer on behalf of 19 Rough Country said that you -- you are not 20 allowed to inspect the crash test vehicles? 21 A. You know every time I've ever 22 talked to a Rough Country lawyer because it's 23 been you. And so --</p>

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<p style="text-align: right;">Page 98</p> <p>1 Q. Okay.</p> <p>2 A. -- you haven't ever talked about</p> <p>3 it, so no.</p> <p>4 Q. Have you ever --</p> <p>5 A. If the crash test is provided and</p> <p>6 documented, I'm using what was provided and</p> <p>7 documented. And I think -- and that's --</p> <p>8 that's all I've used. If someone wants me to</p> <p>9 inspect the vehicles, I -- I haven't done that.</p> <p>10 No.</p> <p>11 Q. Have you ever asked Ms. Cannella</p> <p>12 for permission to inspect the vehicles?</p> <p>13 A. I don't know. I don't remember.</p> <p>14 Q. Okay. And you know from reading</p> <p>15 Mr. Crosby's deposition that those vehicles</p> <p>16 have been preserved and are available at the</p> <p>17 Exponent location in Phoenix. Correct?</p> <p>18 A. That's what he said.</p> <p>19 Q. All right. Do you have any reason</p> <p>20 to dispute that?</p> <p>21 A. No.</p> <p>22 Q. Okay. Let's talk about comparing</p> <p>23 your rerun simulation to the real-world crash</p>	<p style="text-align: right;">Page 100</p> <p>1 simulation or the crash testing?</p> <p>2 A. Correct.</p> <p>3 Q. The speed of the crash test was</p> <p>4 49.9 miles per hour. And the speed you ran</p> <p>5 your simulation was 51. So we have a slight</p> <p>6 differentiation there. The crash test was 1.1</p> <p>7 mile an hour slower than your simulation. Do</p> <p>8 you agree with that?</p> <p>9 A. Yes.</p> <p>10 Q. Okay. And at a slower speed,</p> <p>11 you're going to have less crush indicated on</p> <p>12 the Escape the lower the speed with all other</p> <p>13 variables being equal. Would you agree with</p> <p>14 that?</p> <p>15 A. Not in the context of your line of</p> <p>16 questions, no, because we know that the crash</p> <p>17 test was -- missed to the left by 45 percent --</p> <p>18 at 45 percent more offset. So that's an apples</p> <p>19 and oranges problem. So no, you can't say</p> <p>20 that.</p> <p>21 Q. Well, I'm not talking about the</p> <p>22 offset variable. I'm talking about whatever</p> <p>23 test you run at any offset.</p>
<p style="text-align: right;">Page 99</p> <p>1 test performed by the Defense. And I just want</p> <p>2 to make sure we're clear on what's the same and</p> <p>3 what's different among those two. Okay? The</p> <p>4 height of the F-250 is the same in both the</p> <p>5 simulation and the crash test. We can agree on</p> <p>6 that?</p> <p>7 A. Reasonably, yes, sir.</p> <p>8 Q. And same with the -- with regard</p> <p>9 to the Escape. Correct?</p> <p>10 A. Reasonably, yes, sir.</p> <p>11 Q. All right. And in both there --</p> <p>12 in neither the simulation nor the crash test</p> <p>13 were the -- was cargo placed in the rear of the</p> <p>14 Escape.</p> <p>15 A. Right.</p> <p>16 Q. We can agree on that?</p> <p>17 A. Correct.</p> <p>18 Q. Okay. There was no sunroof</p> <p>19 involved in either your simulation or the crash</p> <p>20 testing for the Escape?</p> <p>21 A. Correct. Correct.</p> <p>22 Q. There was no child seat placed in</p> <p>23 the rear position where Cohen is in either your</p>	<p style="text-align: right;">Page 101</p> <p>1 A. Well, then you need to start a new</p> <p>2 line of questions because basically you're</p> <p>3 saying let's compare my simulation to a</p> <p>4 real-world crash test. Well, my simulation</p> <p>5 compared it to the real-world accident. Your</p> <p>6 crash test is not the real-world accident.</p> <p>7 Your crash test -- if I say it that way, I</p> <p>8 apologize. Exponent's crash test had 45</p> <p>9 percent more offset, which changes an unknown</p> <p>10 number of things.</p> <p>11 Q. Okay. Let's --</p> <p>12 A. Certainly -- but it certainly</p> <p>13 will, as a minimum, disadvantage the Escape.</p> <p>14 Q. Okay. Let's say that there was,</p> <p>15 in the crash testing, the identical offset as</p> <p>16 what you simulated. Let's assume that.</p> <p>17 A. Okay. So we're not talking about</p> <p>18 the Exponent crash test at all now?</p> <p>19 Q. Right. We're talking about -- in</p> <p>20 your opinion we're talking about a hypothetical</p> <p>21 real-world crash test. Would it be appropriate</p> <p>22 to run that real-world crash test at 49.9 miles</p> <p>23 per hour to compare it to your simulation</p>

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<p style="text-align: right;">Page 102</p> <p>1 assuming all other variables were the same?</p> <p>2 MS. CANNELLA: Object to the form</p> <p>3 of the question. It's confusing.</p> <p>4 A. Yeah, that's -- that's an</p> <p>5 engineering problem.</p> <p>6 Q. Well, what speeds -- go ahead.</p> <p>7 A. It's using information that we</p> <p>8 haven't -- that no one has ever done, you know.</p> <p>9 So you know, normally I'm not worried about a</p> <p>10 mile per hour. But sometimes I'm very worried</p> <p>11 about a mile per hour. So that's -- I don't --</p> <p>12 so that's actually a new analysis that I</p> <p>13 haven't done before now. So I'm -- I'm not</p> <p>14 comfortable in doing that. But I'll try to</p> <p>15 answer your questions.</p> <p>16 Q. Let me ask it this way. Do you</p> <p>17 have any criticism of the speed of the impact</p> <p>18 in the crash test?</p> <p>19 A. In a sense, I do because he</p> <p>20 reported that the accident speed of the truck</p> <p>21 could have been down in the forties. That's</p> <p>22 part of his opinions. So I was confused as to</p> <p>23 why he -- why he chose the speed he chose. I</p>	<p style="text-align: right;">Page 104</p> <p>1 causes -- first, the simulation is -- is one</p> <p>2 tool. The crash test is another tool. The</p> <p>3 primary difference between these two tools that</p> <p>4 is the most significant is the excessive offset</p> <p>5 of the crash test. Thank you for listening. I</p> <p>6 don't know why I felt a need to point that out.</p> <p>7 Thank you.</p> <p>8 Q. Sure. And the weights of the</p> <p>9 vehicles, when you compared the weights that</p> <p>10 you used in your simulation to the weights of</p> <p>11 the vehicles in the crash test, that's another</p> <p>12 difference between the two tests -- or between</p> <p>13 the two pools, as you describe them?</p> <p>14 A. Well, I don't remember what the</p> <p>15 weights were. But he said he used full gas</p> <p>16 tanks. I -- so I'm thinking why are you using</p> <p>17 full gas tanks. You're pumping the weight up</p> <p>18 on the F-250. But I didn't look at his weight</p> <p>19 compared to what my weight -- what my measured</p> <p>20 weight was.</p> <p>21 Q. Okay.</p> <p>22 A. I'm wondering why he's not using</p> <p>23 the measured weight of the vehicle as a</p>
<p style="text-align: right;">Page 103</p> <p>1 know why I chose 51 because I wanted a worst</p> <p>2 case scenario. But I'm not sure -- if he's</p> <p>3 trying to work in favor of, you know, proving</p> <p>4 his opinion, which is why he said he needed the</p> <p>5 crash test so he could say that, you know,</p> <p>6 override doesn't -- or not override, but that</p> <p>7 lift kits don't matter, well, he needs to do a</p> <p>8 study to show that. So there's a whole lot</p> <p>9 involved in this line of questions that goes</p> <p>10 way beyond just what you're saying.</p> <p>11 Q. Well, if you -- if you're going to</p> <p>12 compare the real-world crash test to your</p> <p>13 simulation, you would need to run them at</p> <p>14 approximately the same a speed to be able to do</p> <p>15 an apples-to-apples comparison between the two.</p> <p>16 Correct?</p> <p>17 A. Generically, yes.</p> <p>18 Q. Okay. That's all. So let's talk</p> <p>19 now about the differences between the crash</p> <p>20 testing done by Exponent and your simulation.</p> <p>21 You've brought up -- you've brought up the</p> <p>22 offset.</p> <p>23 A. Yeah. The primary difference that</p>	<p style="text-align: right;">Page 105</p> <p>1 foundation. So yeah, there are -- so that is</p> <p>2 something that could be looked at.</p> <p>3 Q. All right. Are there any other --</p> <p>4 other than the offset, which you said is the</p> <p>5 primary difference, what are -- what are the</p> <p>6 other differences between the crash test and</p> <p>7 your simulation?</p> <p>8 A. I think we discussed things to be</p> <p>9 considered. I haven't tried to see the</p> <p>10 differences between the two. That's not been a</p> <p>11 concern of mine. I tried to look at his crash</p> <p>12 test as to what he represented it to be. My</p> <p>13 simulation was not done for his crash test.</p> <p>14 Mine was another methodology. So I don't -- I</p> <p>15 don't know the answer to the question off the</p> <p>16 top of my head.</p> <p>17 MS. CANNELLA: Mr. Hill, what --</p> <p>18 what in his supplemental reports are we</p> <p>19 referring to here?</p> <p>20 MR. HILL: We're referring to his</p> <p>21 criticisms of the crash test in his June 14</p> <p>22 supplemental report.</p> <p>23 A. Well, I can do that. But that's</p>

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<p style="text-align: right;">Page 106</p> <p>1 different than comparing it to the simulation. 2 Q. Well, it's -- it's within the same 3 realm. You've made an allegation that the 4 crash test is invalid because the offset was 5 improper. And so I'm trying to establish how 6 that compares to your simulation -- your rerun 7 simulation that I've never had a chance to ask 8 you the first question about. 9 MR. HILL: So I think this is well 10 within the scope of his -- both of his reports. 11 Q. And so this leads to the question 12 of, with HVE, right, you could change the 13 parameters within your simulation to match the 14 parameters that were found in the crash 15 testing. Correct? 16 A. No. 17 Q. And why not? 18 A. Because I'm not -- I'm not trying 19 to re-create his crash test. I'm -- I'm trying 20 to understand the effect of -- on the subject 21 accident of lowering the truck and to 22 demonstrate what is intuitively obvious and has 23 been in the business as engineers using physics</p>	<p style="text-align: right;">Page 108</p> <p>1 A. His crash test -- 2 Q. Go ahead. 3 A. The problem is his crash test is 4 not this accident. So if -- but I know what 5 the accident was. And I did a simulation for 6 that. But to just start doing a simulation to 7 compare to his crash test, I would have to 8 start the whole process over. And I don't know 9 where that would lead me. Certainly I'm -- I'm 10 not going to agree that I would even use a 11 simulation to analyze this crash test. I'd 12 have to do that analysis, and that hasn't been 13 done. 14 Q. Well, your simulation does not 15 analyze the actual subject crash in this case? 16 A. Sure, it does. It's a 17 representation of the subject crash with the 18 vehicles lower. It's -- it's not analyzing the 19 accident. But it's used to study the accident. 20 And I've determined that it's reasonable to do 21 it the way that we've done it, yes. But that 22 takes work to do. You can't just do that with 23 his crash test because that's -- he -- that's a</p>
<p style="text-align: right;">Page 107</p> <p>1 and Newton's laws that when you strike the 2 structure of a vehicle, the frame of the 3 vehicle, you get less crush. And when you 4 don't strike those and hit tailgates, you get 5 more crush. That was the purpose of it. 6 I'm criticizing his crash test just purely 7 based on his crash test compared to the 8 accident. You're asking for another -- you're 9 asking me to do an analysis I haven't done. 10 Q. I'm asking you is it possible to 11 do that if you wanted to. Could you change the 12 offset in your simulation to the offset that 13 you claim existed in the crash testing? Is 14 that even possible within the HVE software? 15 A. Not in the line of the way I think 16 you're asking the questions. No. I mean, 17 somebody could go put in some numbers if they 18 want. But I wouldn't -- I don't know that I 19 would -- I don't know that I would compare 20 those two. But I'd certainly know that I would 21 compare my simulation to the accident. 22 Q. So you'd compare your simulation 23 to the accident --</p>	<p style="text-align: right;">Page 109</p> <p>1 new accident. That's a different animal. I 2 can't -- I can't study raccoons as a zoologist 3 and then turn around and say I'm going to study 4 opossums, you know, the same way. You've got 5 to take the work -- you've got to do the work 6 and see if the methodologies you were using to 7 study it are going to -- are going to be 8 reasonable. 9 Q. That's exactly what I'm getting 10 at. To the determine whether the methodology 11 you used is reasonable, what have you done to 12 verify that HVE is a scientifically reliable 13 methodology for predicting crush in a 14 hypothetical accident like you've used it in 15 this case? 16 A. Well, that's -- I mean, I've seen 17 HVE used many, many times to study potential 18 accidents. You know, that's a use of it. I 19 mean, I've seen, you know, companies -- I mean, 20 I'm even sure I've seen auto manufacturers use 21 it, but the -- to study events that may or may 22 not happen. But in this case HVE was 23 specifically designed for crash reconstruction</p>

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<p style="text-align: right;">Page 110</p> <p>1 using the -- the stock vehicles that hit frame 2 to frame like they -- like at levels that are 3 absorbing the energy, where the AV stiffness 4 coefficients are generated. 5 And therefore because in the simulation we 6 ran we did hit the vehicles bumper to bumper, 7 it means that it's a -- and it calculates it 8 using a methodology that's been well 9 established in the industry. And there's 10 papers that say that it's valid for this type 11 of study. That's why HVE sells it, is for us 12 to be able to do this. So we -- and in this 13 case we also have a treasure-trove of data in 14 the black box from the truck. We know the 15 delta-V's. We know the -- the -- you know, the 16 speed of the truck at impact. So therefore we 17 have reasonable constraints. 18 We have given stress test coefficients. We 19 have given geometries. We know we're hitting 20 bumper to bumper. We know we're engaging the 21 two structures of the two vehicles. We know 22 we're looking for an impact speed of X and a 23 delta-V of X. And we're using it to predict,</p>	<p style="text-align: right;">Page 112</p> <p>1 scientifically reliable methodology? 2 MS. CANNELLA: Asked and answered. 3 Q. Go ahead. 4 A. I think that's what I described a 5 minute ago. I've been using the program for a 6 long time. My understanding that this is -- we 7 have plenty of data to -- that we're targeting 8 for, that we're given. We have crush stiffness 9 that are available from the program itself. So 10 literally purely within the program, it will 11 predict crush based on the impact speed that 12 we're given from the black box. And so we can 13 use that and match the delta-V's. And then the 14 program is designed to report what the crush 15 would be. 16 That is clearly a proper use of the program 17 based on my experience, my training, and the 18 literature that's out there in the industry. 19 This is -- this is -- as an engineer, I have no 20 concerns about that at all. We're not doing 21 anything new or novel with the program. This 22 is what we buy it for. 23 Q. Okay. You mentioned all of the</p>
<p style="text-align: right;">Page 111</p> <p>1 using Newton's laws, what the crush would be. 2 Q. What article -- you just mentioned 3 there are papers that said you could use HVE in 4 this context. Can you cite to any of them in 5 this deposition? 6 A. I don't have them memorized off 7 the top of my head. But I mean they 8 certainly -- 9 Q. Okay. 10 A. -- are out there. 11 Q. All right. Have you done 12 anything -- my question -- my original 13 question -- and I move to strike your answer. 14 My original question is, have you performed 15 any testing or any analysis to validate that 16 your use of HVE in this case was a 17 scientifically reliable methodology? 18 MS. CANNELLA: Object to the form. 19 Asked and answered. Misstates the prior 20 question. 21 Q. Go ahead. It's a yes-or-no 22 question. Have you personally done anything to 23 validate that your simulation is a</p>	<p style="text-align: right;">Page 113</p> <p>1 knowns -- all of the known information that you 2 use, which you say supports the use of HVE such 3 as all those things you just mentioned, the 4 block box data, the delta-V's, the speeds, and 5 so forth. All of that applies to the -- to the 6 actual crash testing as well, like the crash 7 testing has the benefit of all of those same 8 known data points. Correct? 9 A. I disagree. I don't -- that is a 10 huge broad question. You just went from asking 11 me what I did to about Grimes. I think that 12 that same black box data is available. But to 13 just blanket somehow how that relates to the 14 crash test, I need something specific about the 15 crash test. I can't just -- I don't know what 16 the -- what I'm being asked, it's just too 17 broad of a -- of a potential here. 18 Q. It's pretty simple. Other than 19 the offset, okay, what other data point did the 20 crash test not follow? 21 MS. CANNELLA: Object to the form 22 of the question. I think -- I think this is 23 outside the scope of his report.</p>

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<p style="text-align: right;">Page 114</p> <p>1 MR. HILL: Not even close to being 2 outside the scope. 3 Q. But go ahead. 4 MS. CANNELLA: Which -- which part 5 of the report are you asking about, the 6 supplemental -- 7 MR. HILL: He is -- he is 8 critical -- the entire report is critical of 9 the crash testing. And I'm asking him a 10 specific question about what part of the crash 11 testing other than the offset was incorrect. 12 A. Well, we've said the offset is the 13 thing that really invalidates it because it's a 14 completely different crash to the accident. 15 And then after that Grimes -- most of my report 16 is about Grimes's characterization of it 17 without actually having any data that he used. 18 He wants to say it was a visual. And so we 19 tried to provide in the report things that 20 demonstrated those things. So the first part 21 of it is the crash test is not valid because 22 it's not a reasonable representation of the 23 accident. And Grimes himself admits that in</p>	<p style="text-align: right;">Page 116</p> <p>1 location to what you believe it was in the 2 crash test? 3 MS. CANNELLA: Object to the form 4 of the question. Goes outside his supplemental 5 report. 6 Q. Go ahead. 7 A. I -- I'd take time to study before 8 I even tried to do anything. I would have to 9 look at the crash test from that perspective, 10 which I haven't done. I've literally just used 11 his data and his answers. You're asking me to 12 do a separate engineering analysis. I'm not -- 13 I'm not willing to tell you what I can do or 14 how I would do it or discuss even concepts of 15 it until I take the time to look at it from 16 that perspective. I know it sounds simple to 17 you, but it's not. That's -- that's how 18 mistakes are made. I mean, it needs to -- it's 19 an engineering problem that needs its due time 20 and effort before I can start answering those 21 questions. 22 Q. But as you sit here today, you 23 can't identify what you would need to do as</p>
<p style="text-align: right;">Page 115</p> <p>1 his deposition. 2 And then the second part of the report has 3 to do with basically you can -- basic 4 misrepresentations Mr. Grimes makes about 5 conclusions. As far as differences, I don't 6 know that I have any cataloged. The offset is 7 the thing that has been most foremost in my 8 mind. I think that -- I think that we have to 9 go to the results and, you know, after that 10 look at the results as -- as issues such as 11 that, you know, the impact wasn't in the right 12 location, that type of stuff. 13 Q. Okay. So what does it take in the 14 HVE software to change the impact location, the 15 offset? How would you do that if you wanted to 16 do it? 17 A. We just change the position of the 18 vehicles. 19 Q. Okay. If you were to be asked by 20 Ms. Cannella to run an HVE simulation that 21 would replicate the crash testing, what would 22 you need to do other than what you just 23 described, which is change the offset or impact</p>	<p style="text-align: right;">Page 117</p> <p>1 part of that engineering effort in order to 2 simulate the crash test? 3 A. I wouldn't start until I took the 4 time to answer that question. And I would 5 start -- I would open that concept up. And I 6 would arrange my file materials, and I would 7 start looking at it, and I would start asking 8 the questions. I'm not arrogant enough to 9 think that I know the answer before I do the 10 work. I would do some work to prepare myself 11 to answer that question, and I have not done 12 that. 13 Q. But it would be possible to do 14 that? 15 MS. CANNELLA: Objection to the 16 form of the question. Goes outside the 17 supplemental report. 18 Q. Go ahead. 19 A. No. We don't know if it's 20 possible or not. We have to -- we have to 21 start looking at that. 22 Q. What about if it's possible to 23 compare your simulation to the actual crash,</p>

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<p style="text-align: right;">Page 118</p> <p>1 how is it not possible to compare your 2 simulation to the crash testing? 3 A. Well, because we haven't done the 4 work. You have to sit down and look at the 5 crash test and then understand it and then 6 start from a simulation standpoint, is this 7 something that we should or should not be 8 seeing. See, Grimes's whole ridiculous 9 argument is that because -- is that there was 10 some kind of an offset that renders the 11 simulation useless. This is not an offset -- 12 not an offset. Excuse me -- an override crash. 13 It's not an override. If his crash test proved 14 anything, it's that if you lower the bumpers, 15 you lose the override component of this 16 accident. 17 And so if his argument is you can't use the 18 simulation because there is override, then we 19 have to do the same thing when we start moving 20 the impact location. We have to stop and look 21 at that and see if it affects something like 22 that. So I'm just saying I can't answer your 23 questions about trying to simulate the crash</p>	<p style="text-align: right;">Page 120</p> <p>1 possible. An engineer should not answer if 2 it's possible unless he can reasonably know if 3 it's possible. I can't reasonably know that 4 until I do the work. And that's -- I mean, and 5 that's the difference between you and me. I'm 6 an engineer. I actually know that there's a 7 reason you have to go do the work. You just 8 think it's, hey, just, you know, change the 9 number and put it in and it magically -- that's 10 not -- that's not a reasonable response to me 11 as a professional engineer. I can't answer 12 your question because I don't know enough to 13 answer it. 14 Q. Let me ask it this way. Do you 15 have any reason to believe that it would not be 16 possible? 17 MS. CANNELLA: Objection. Asked 18 and answered. 19 Q. Go ahead. 20 MS. CANNELLA: And confusing. 21 A. I'd have to -- I'd have to look at 22 that question from an engineering perspective 23 and take time to look at it. I don't -- I have</p>
<p style="text-align: right;">Page 119</p> <p>1 test because I have to take the time to look at 2 it and -- and consider that as an engineer. I 3 shouldn't answer questions I haven't looked at 4 and considered because there's reasons as to -- 5 that might come into play. And I don't presume 6 to know all of those things off the top of my 7 head for something I have not analyzed from 8 that perspective. 9 I have looked at his crash test relative to 10 the accident. I've looked at my simulation 11 relative to the accident. You're asking for a 12 whole other piece of analysis. I'm not -- I'm 13 not prepared to do the analysis sitting here on 14 a new problem. It's a whole new problem. 15 Q. I appreciate your answer, 16 Mr. Buchner. We're going to be here all day. 17 MR. HILL: I move to strike the 18 response. 19 Q. It was a simple question. I said 20 is it possible. And then you went on to -- 21 your response was, well, I haven't started that 22 yet. 23 A. Well, I can't answer if it's</p>	<p style="text-align: right;">Page 121</p> <p>1 not done that. I cannot do a completely brand 2 new complete accident investigation or a 3 complete test versus simulation investigation 4 in a casual conversation where you just bring 5 it up for the first time. No. I -- that would 6 be inappropriate. 7 MR. HILL: Move to strike as 8 unresponsive. 9 A. Excuse me. I'm going to respond 10 to that. Just because you don't understand 11 what I'm saying, don't say it's not responsive. 12 I'm giving you the exact right answer as an 13 engineer. Professionally this is the right 14 answer. Just because you don't appreciate it, 15 I'm sorry. 16 It's the right answer. It's not as easy as 17 you want it to be. And it's not that simple 18 answer that you want. The answer is, we don't 19 know until we do it, so I can't tell you the 20 answer. 21 Q. Let's -- 22 A. I can't speculate the answer. 23 Q. Let's approach it this way. In</p>

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<p>1 your prior deposition when talking about this,</p> <p>2 you said that HVE is a robust program for</p> <p>3 analyzing bumper-to-bumper or</p> <p>4 structure-to-structure crashes.</p> <p>5 A. Yes, sir.</p> <p>6 Q. We can agree?</p> <p>7 A. Yes.</p> <p>8 Q. The crash testing was a</p> <p>9 bumper-to-bumper, structure-to-structure crash?</p> <p>10 A. Actually no. They missed some of</p> <p>11 the structure in the way they did it. They</p> <p>12 moved the -- they moved the tow hook, which is</p> <p>13 the tip of the frame, outside the main</p> <p>14 structure of the Escape. They moved it so far</p> <p>15 to the left that it's not actually -- there's</p> <p>16 some -- there's some worry about how -- the</p> <p>17 effect of that. It obviously over -- it</p> <p>18 disadvantaged the Escape and made the crush</p> <p>19 more than it would have been had that not</p> <p>20 happened.</p> <p>21 In the accident, that frame horn, that tow</p> <p>22 hook, the tip of the frame, that bumper area</p> <p>23 did hit on the rear of the Escape and left a</p>	<p>1 accident in the crash test?</p> <p>2 MS. CANNELLA: Objection. Asked</p> <p>3 and answered.</p> <p>4 Q. That's a yes-or-no question.</p> <p>5 MS. CANNELLA: Asked and answered.</p> <p>6 A. I explained it very well in the</p> <p>7 last answer.</p> <p>8 Q. You have testified in your report</p> <p>9 that this was not an override. It was a</p> <p>10 bumper-to-bumper, structure-to-structure crash</p> <p>11 test. Are you now saying that you don't --</p> <p>12 MS. CANNELLA: Objection.</p> <p>13 Q. -- believe that?</p> <p>14 MS. CANNELLA: Objection. You</p> <p>15 mis-testified -- you mischaracterized his</p> <p>16 testimony and report. And asked and answered.</p> <p>17 Q. Go ahead.</p> <p>18 A. I'm not a hundred percent sure</p> <p>19 what you were asking.</p> <p>20 Q. It's very simple. You put in your</p> <p>21 report that --</p> <p>22 A. I'm sorry. I'm sorry. We've</p> <p>23 already -- I don't -- the very simple part of</p>
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<p>1 really nice mark that we can see on that rear</p> <p>2 structure area. So if we -- if we just lower</p> <p>3 it, well, we're getting good engagement. But</p> <p>4 as far as a move to the outside, you're now</p> <p>5 starting to mess with that thing that you just</p> <p>6 asked about or that you said I told you about</p> <p>7 previously. That was a -- that was very</p> <p>8 accurate, what I said previously. Those are</p> <p>9 the types of things that have to be gone</p> <p>10 through.</p> <p>11 That's just an example of the types of</p> <p>12 things. It doesn't mean it's all the things.</p> <p>13 And I don't know what all the things are. So I</p> <p>14 can't answer the question until we do the work.</p> <p>15 That's just a good example of the type of thing</p> <p>16 that ought to be considered.</p> <p>17 Q. I did not ask you whether the</p> <p>18 crash test was representative of the accident.</p> <p>19 I didn't ask you about whether it properly</p> <p>20 represented the offset. This question was</p> <p>21 simple. Regardless of the offset, regardless</p> <p>22 of the positioning, do you agree it was a</p> <p>23 bumper-to-bumper and structure-to-structure</p>	<p>1 the question is your perspective. That doesn't</p> <p>2 mean I can answer -- it doesn't mean it's going</p> <p>3 to be a simple question from my perspective</p> <p>4 because you don't -- you don't have all of the</p> <p>5 perspective I have. We cannot say very simple</p> <p>6 before the question. I wouldn't have to answer</p> <p>7 to something and agree to something that may or</p> <p>8 may not be true.</p> <p>9 Q. Well, wait a second now. I can --</p> <p>10 I'm not asking a complicated question.</p> <p>11 A. You are. That's the problem.</p> <p>12 Just don't say very simple and insinuate it's a</p> <p>13 simple question. Just please, very simple is a</p> <p>14 statement followed by a question. If we could</p> <p>15 just have the question and let me determine</p> <p>16 whether --</p> <p>17 Q. I don't need to be lectured about</p> <p>18 how I ask my questions. If you disagree with</p> <p>19 my characterization of the question, that's</p> <p>20 fine. I'm trying to make the question --</p> <p>21 MS. CANNELLA: Mr. Hill, calm</p> <p>22 down. Calm down. Don't be yelling at the</p> <p>23 witness. He's trying to explain to you his</p>

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<p style="text-align: right;">Page 126</p> <p>1 answer. You don't like it. You want it to be 2 yes or no. And he doesn't have a yes or no 3 answer. 4 MR. HILL: No. He's criticizing 5 the form of my question, which I can use the 6 word -- 7 Q. If you don't like very simple, 8 then explain that it's not a very simple 9 question. 10 MS. CANNELLA: That's what he just 11 did. 12 Q. I'm trying to make the question 13 as -- as limited as possible so that it doesn't 14 bring in all of these other variables that 15 you're bringing up. I'm trying to establish 16 that HVE, if you can use it to simulate a 17 bumper-to-bumper crash like you did, you could 18 use it to simulate a bumper-to-bumper crash 19 like the crash test by just simply changing the 20 offset because that's the one thing you've 21 identified that's different between the crash 22 test and your simulation? 23 MS. CANNELLA: Asked and answered.</p>	<p style="text-align: right;">Page 128</p> <p>1 Q. Sorry. I've had trouble in the 2 past with people hearing me. So I'll turn it 3 down myself. I apologize. I've had multiple 4 instances in this very case where they said my 5 speaker doesn't work. 6 A. And I remember that from the last 7 depo. I mean, that's -- that's a hundred 8 percent fair. Thank you. We're good. 9 Q. Yeah. So my question is, could 10 you -- is it possible -- not have you done it. 11 Is it possible to take your exact HVE 12 simulation that you ran in this case and change 13 the offset to match the crash testing offset as 14 you've determined that offset to be? Is that 15 even -- is that possible? 16 A. For the reasons we've talked 17 about, I don't know. 18 Q. Okay. 19 A. I don't know if it would be 20 representative or not. I have great concerns 21 if it would work. So we don't know. 22 Q. Well, I'm not asking you if it 23 would be representative. I'm asking is it</p>
<p style="text-align: right;">Page 127</p> <p>1 Q. And you're denying that that's 2 true? 3 A. I'm not denying anything. I'm 4 telling you, you can't just blanket say that's 5 true. You've got to -- 6 Q. So you -- 7 A. -- go do the work -- 8 Q. No. You -- 9 A. Can I answer? 10 Q. Sure. 11 A. For the reasons I explained, it's 12 a very -- I have concerns over answering the 13 question at all. And that's what I'm telling 14 you. It -- it takes some effort. And that's 15 an analysis that hasn't been done. And so it's 16 not a simple question at all. It's an 17 incredibly complex question. 18 Q. All right. If you ran an HVE 19 simulation mirroring yours in this case exactly 20 except you changed the offset -- 21 A. Let me turn the volume down. 22 You're -- you're -- I mean, literally it's 23 hurting my ears. Let me just --</p>	<p style="text-align: right;">Page 129</p> <p>1 possible to run that type of simulation? 2 A. Well, I already told you anybody 3 can go in and change a number and run 4 something. It doesn't mean that it's valid or 5 that it's good or anything like that. I mean, 6 you can -- so I mean, is it possible to move 7 the positions? Yes. Is it reasonable, will 8 you get any value from it? I don't know. 9 That's -- the analysis has to be done. You 10 can't -- but yeah, people can make -- I mean, I 11 can make it fly out of the air and land on top, 12 I mean, if I want to. But that doesn't mean 13 that's representative or reasonable or a good 14 use of the program or that it would be 15 accurate. 16 Q. What can you cite to as we sit 17 here today that would cause that HVE run I've 18 just proposed, your exact run but with a 19 different offset to all of a sudden be 20 unrepresentative or unreliable? 21 A. Well, I've explained, you have to 22 do an analysis to think about this. That is a 23 complete separate engineering analysis than</p>

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<p style="text-align: right;">Page 130</p> <p>1 what we're dealing with here. We're using a 2 simulation to look at the accident, which we 3 decided is reasonable and appropriate. It's 4 just part of our range. Remember, we did it 5 hand calculations or standard crush 6 calculations. We wanted to do it a different 7 way, and we found the simulation. The one that 8 gave the worst results, we're reporting as our 9 answers, which is the simulation. So it's just 10 our attempt to get a range. If we go try to 11 model the crash test with a simulation, we have 12 to go -- we have to go do the same thing again. 13 We have to go through all of that stuff again, 14 and nobody has done that. So I don't know how 15 to answer the question. You're asking me to do 16 a whole test reconstruction as I'm sitting 17 here. And we've got, you know, hundreds of 18 hours of engineering in on -- on these things 19 we have done. 20 You're asking me to do all -- to answer 21 questions about something we haven't done. And 22 I'm not comfortable doing that. And there are 23 concerns. I gave you one big example is that</p>	<p style="text-align: right;">Page 132</p> <p>1 actually moved a good part of the truck 2 outside the -- outside the -- where it was in 3 the accident. Well, we've got good overlap in 4 the accident. You increased the offset by 45 5 percent. 6 I don't know as I sit here the answer to 7 that question. I'm not smart enough. I have 8 to do the work, just like I did in this one. I 9 have to -- I have to -- I have to sit and study 10 that. I don't know. 11 Q. Well, I'm not asking -- 12 A. I can't give you the answer. 13 Q. I'm not asking -- 14 A. Go ahead. 15 Q. I'm not asking what the result of 16 an HVE simulation with those parameters would 17 be. I know you can't answer that. 18 A. No, I'm not even pretending to 19 tell you a result. I've never even mentioned 20 result today. I'm saying I don't know that I 21 can use it for that. It takes work to look at 22 that because there's going to be -- that's a 23 new analysis. I can't tell you how your house</p>
<p style="text-align: right;">Page 131</p> <p>1 they moved the tow hook and the frame outside 2 the back of the vehicle. That -- you know, and 3 that's -- that's an issue. That would be 4 one -- an example of an issue that would have 5 to be looked at. 6 Q. How would you look at that issue 7 other than changing the offset? 8 A. I don't know. I haven't done the 9 work. That's the thing about it. You have to 10 do the work. I have to sit down and say, okay, 11 we're going to prepare ourselves to look at 12 this. That's -- you think I'm -- I'm not 13 omnipotent. I have to do the work. 14 Q. What work are you referring to? 15 You just said the tow hook is outside of where 16 it was in the crash. That relates solely to 17 the offset. What work would you need to 18 determine how to deal with that? 19 MS. CANNELLA: Objection. Outside 20 the scope of his supplemental reports. 21 Q. Go ahead. 22 A. How does that affect the -- what 23 we call the frame level impact? You've</p>	<p style="text-align: right;">Page 133</p> <p>1 is going to look until I draw it and design it. 2 I can't tell you if it's a good house. I have 3 to do actually do the work if I'm an architect. 4 You're asking me to tell you an answer that -- 5 that I can't know. 6 Q. I'm asking you, are you saying 7 that you can't answer the question as to 8 whether HVE is capable of simulating the crash 9 test? 10 MS. CANNELLA: Asked and answered 11 many times. 12 Q. Is that your answer, that without 13 doing work, without doing an investigation, 14 without -- you can't answer here today whether 15 HVE is even capable of simulating an accident 16 like the crash test? 17 MS. CANNELLA: Same objection. 18 A. Yes. For all of the things I've 19 talked about. 20 Q. Okay. 21 A. That can't be given today. 22 Q. All right. And you've explained 23 all of the reasons already why you can't answer</p>

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<p style="text-align: right;">Page 134</p> <p>1 the question as to whether HVE is capable of 2 simulating the crash test? 3 MS. CANNELLA: Objection. 4 Q. You've given us all the reasons 5 for why you can't answer that question? 6 MS. CANNELLA: Objection. Asked 7 and answered. 8 Q. Okay. Asked and answered. So 9 it's been answered. That's what I want to 10 confirm. 11 A. Well, we don't know the -- we 12 don't -- we have to do the analysis before we 13 can give all the answers. We can give you an 14 example of an answer. But we don't know. So 15 no, the analysis has to be done before the 16 question can be answered. That's -- that's my 17 answer is you don't know until you do the 18 analysis. And -- and that's what you're 19 saying. 20 So no, we don't know. And I've given you 21 examples of why and tried to explain why -- why 22 it's not simple at all. That's the -- that's 23 the correct answer. And it's the same thing</p>	<p style="text-align: right;">Page 136</p> <p>1 at all, period. To go to 13 means we're now 2 studying other accidents. 3 At twelve I know I'm conservative, and I 4 know I'm consistent with my deposition, and I 5 know that it allows me to give my opinions. It 6 doesn't mean we couldn't use 13, but I have to 7 sit and decide if it would be appropriate to do 8 that. 9 I've done that at twelve. You keep wanting 10 me to answer questions that haven't been 11 engineering processed as a -- as a responsible 12 engineer. I can't answer the question because 13 we haven't -- that's outside the scope of what 14 we've done in the past. 15 Q. I haven't asked you whether that 16 type of test would be relevant to this case. I 17 didn't ask you whether it was relevant to the 18 subject accident. 19 A. I need a restroom break. I need a 20 restroom break. 21 Q. The question was only, can you run 22 the -- 23 THE WITNESS: Can I take a</p>
<p style="text-align: right;">Page 135</p> <p>1 I've been trying to say for the last half hour. 2 Q. Is it possible to run the HVE -- 3 you ran it at twelve inches offset. Can you 4 run it at 13? 5 A. We've answered this question. 6 Q. So the answer is yes? I want to 7 make sure it's clear. 8 A. No. No. 9 Q. You can run it at 13? 10 A. No. You're wrong. We've told you 11 that when -- that you can make it do any -- you 12 can put the number in and run it. But it's not 13 necessarily going to be valuable or 14 representative, just like the dropping the car 15 from the moon. 16 Q. That's -- but that's not my point. 17 A. But no, it is your point. 18 Q. Okay. 19 A. And you're not listening to my 20 point. My point is, we don't -- we cannot 21 change those things until we do an analysis 22 about them. I would not do it at 13 and say it 23 had any use for analyzing this subject accident</p>	<p style="text-align: right;">Page 137</p> <p>1 restroom break? 2 MR. HILL: Sure. 3 THE WITNESS: Okay. Thanks. 4 THE VIDEOGRAPHER: The time is 5 1:03 p.m. We are off the video record. 6 (A break was taken.) 7 THE VIDEOGRAPHER: The time is 8 1:13 p.m. We're back on the video record. 9 MR. HILL: Thanks. 10 Q. (Mr. Hill) Mr. Buchner, I'm sorry 11 if we got a little sideways there. I -- I was 12 only trying to speak loudly so that you could 13 hear me because I know we had problems the last 14 time. And I apologize about the frustration of 15 us misfiring. And I'm trying to ask you as -- 16 as direct and as, you know, intelligent 17 questions as I can. And so I appreciate your 18 attempts to answer. But I think we've 19 established a record now of what you can and 20 can't answer. And I'm glad to revisit that -- 21 any of that if you would like, but I don't 22 intend to. 23 MS. CANNELLA: I would like to say</p>

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<p style="text-align: right;">Page 138</p> <p>1 for the record that the volume of your voice 2 and the aggressiveness with your questioning 3 was not related to the -- to the technical 4 difficulties and it goes up the more irritated 5 you are with him. So if you could please lay 6 off of that, we would appreciate that. 7 MR. HILL: I'm fine with that. I 8 will note that he was irritated with me as 9 well. 10 A. I'm happy to proceed, sir. Thank 11 you. 12 Q. All right. 13 A. And I did need the break. 14 Q. Yeah, I understand. And I'm happy 15 to take a break at any time. And I'll admit, I 16 needed a break as well. So can you cite to any 17 instance that you're aware of where an HVE 18 simulation was found admissible in court to 19 support opinions regarding the level of crush 20 that would be predicted in a hypothetical 21 crash? 22 A. I've never tried to do that. No, 23 sir. I would imagine that we've used it to</p>	<p style="text-align: right;">Page 140</p> <p>1 Q. Well, that wasn't my question. 2 Can you cite to an example where you've given 3 testimony like this using HVE before where it 4 was found admissible in court? 5 A. Yeah, I don't know. That's too 6 big a question for me to know the answer to 7 here today. I don't know. 8 Q. Okay. I think I already know how 9 you're going to answer this, but I feel like I 10 have to ask the question. If the HVE software 11 that you use is accurate in predicting crush 12 and intrusion, would you agree that it should 13 be able to predict the levels of crush and 14 intrusion that were seen in the crash test if 15 the proper parameters that were involved with 16 the crash test are input into the software? 17 MS. CANNELLA: Object to the form 18 of the question. Goes outside the scope of his 19 supplemental testimony. And asked and 20 answered. 21 Q. Go ahead. 22 A. The answer to that is the same as 23 the other questions. I don't know. I can't</p>
<p style="text-align: right;">Page 139</p> <p>1 demonstrate before. But I've never even 2 thought about that question before now. I 3 don't know. 4 Q. But you're not aware of any 5 instances where that's actually happened? 6 A. I might be. I -- that's a big 7 question. 8 Q. And you have never in your career 9 attempted to use an HVE simulation like this 10 one as admissible evidence in court to support 11 opinions regarding the predicted level of crush 12 in a hypothetical crash before this case? 13 A. I can't say I haven't. I mean, 14 we -- we use it to study accidents all the 15 time. I mean, that's -- that's what it's there 16 for. And I've seen other people, you know, use 17 it. I think I've even seen the auto 18 manufacturers use it to study what happens in 19 crashes so they don't have to crash cars, which 20 is exactly what we're doing here. So I think 21 we've done this many times, just not here 22 knowing any examples of it. I'm here to look 23 at this case.</p>	<p style="text-align: right;">Page 141</p> <p>1 agree to that at all as I sit here for the same 2 reasons we've been talking about. 3 Q. And I don't want to revisit that. 4 But one of the main reasons is that you haven't 5 tried that and haven't done the work. Is that 6 fair? 7 MS. CANNELLA: I object to the 8 form of the question. Asked and answered. 9 Mis-summarizes his testimony. 10 MR. HILL: That's why I'm asking. 11 MS. CANNELLA: Mr. Hill, if we're 12 going to keep going on this line of 13 questioning, I need you to explain to me why 14 questions about whether Mr. Buchner used HVE to 15 re-create Mr. Grimes's crash test are relevant 16 to his report -- his supplemental report. I 17 don't -- he did not do it. And you've been 18 asking him questions about if he could do it 19 for probably close to an hour now. So if it's 20 not work he did, I don't understand how this is 21 relevant to his supplemental reports. 22 MR. HILL: It's relevant to his 23 supplemental report of May 8 of 2024 where for</p>

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<p style="text-align: right;">Page 142</p> <p>1 the first time he actually provided legitimate 2 HVE data and produced a simulation that 3 included the axle of data upon which that 4 simulation was based. And so well within the 5 scope of this deposition is the reliability of 6 the HVE methodology that he used in generating 7 his FR26 amended report. 8 MS. CANNELLA: And -- and those 9 questions are fine. But the questions you've 10 been asking him are about could he use HVE to 11 re-create a Defense expert -- Exponent crash 12 test, which is not -- not in his report. It's 13 not work he did. It's not work he was asked to 14 do or tried to do. It's not work that the 15 Defense did. So it's not an issue here. 16 And you know, if you want to ask him about 17 his data that he produced with his May report 18 or reliability of HVE in general, that's fine. 19 But the questions about whether he could do 20 work that he didn't do for the Defense side is 21 not -- it's not in his report. It's not 22 relevant to his report. And I'm going to 23 object to any more of that.</p>	<p style="text-align: right;">Page 144</p> <p>1 Mr. Grimes even said. 2 MR. HILL: Well, that's the point 3 I'm trying to make. So if you disagree with 4 it, that's fine. But in analyzing whether HVE 5 is reliable in the way he used it, I can ask 6 questions about what situations it is and what 7 situations it's not reliable. 8 MS. CANNELLA: And he's answered 9 that question a hundred times. 10 MR. HILL: He's never even 11 answered the question about whether it's 12 reliable in predicting the results of the crash 13 test. That's the question he won't answer. 14 MS. CANNELLA: He -- he has 15 answered that many times. He said it's 16 reliable in ours. And he would have to study 17 it to know if it's reliable in a crash -- in 18 the Exponent test. That's what he said for the 19 last 45 minutes. So you know, that's -- those 20 questions -- that line of questions, unless 21 there's something else you haven't told me 22 about why it would be permissible to go into 23 this stuff for so long, I'm going to object to</p>
<p style="text-align: right;">Page 143</p> <p>1 MR. HILL: It relates to the 2 reliability of HVE. 3 MS. CANNELLA: It doesn't. It 4 doesn't. It relates to the reliability of HVE 5 in a crash test that he did not analyze. That 6 he didn't -- he did analyze it, but he didn't 7 use HVE to create it. 8 MR. HILL: All right. I'm not 9 going to sit here and argue with you. I'll ask 10 my questions. You can object, and we can take 11 it up with the -- 12 MS. CANNELLA: Well, I'm getting 13 real close to telling him not to answer things. 14 So that's why I understand what your argument 15 is. So if we have to call the Court, I want to 16 understand what your argument is. So I'll 17 agree to it if it's reasonable. But it doesn't 18 seem reasonable to me at this point. 19 MR. HILL: The argument is that 20 HVE, if it's reliable, it should be reliable 21 across simulation of all accidents. 22 MS. CANNELLA: That's absolutely 23 not true. That's actually opposite of what</p>	<p style="text-align: right;">Page 145</p> <p>1 that. Just when you ask -- 2 MR. HILL: He can't answer the 3 question or doesn't have the ability to answer 4 doing future work as to whether HVE could 5 reliably predict the crash test if the proper 6 inputs were put into the software. 7 MS. CANNELLA: You're talking 8 about the crash test again. He didn't do that. 9 MR. HILL: I'm not asking whether 10 he's done it. I'm saying with his knowledge 11 and expertise and his -- you know, he says he 12 knows all about HVE and how it's reliable and 13 how it's used in the industry and all its 14 applications. And so based upon all that, he 15 chose to use it in this case. And I'm asking 16 based upon all of that knowledge and 17 information and, you know, experience with HVE, 18 should it be able to predict the crash test 19 results if the proper inputs are put into the 20 software. 21 MS. CANNELLA: And he said he 22 doesn't know. I mean, he's literally said that 23 probably about twenty times.</p>

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<p style="text-align: right;">Page 146</p> <p>1 MR. HILL: Okay. Great. Then</p> <p>2 that's good. If he can't answer that question,</p> <p>3 that's fine.</p> <p>4 MS. CANNELLA: Can we move on?</p> <p>5 MR. HILL: Yeah. That was the</p> <p>6 last question I was asking on the issue, and</p> <p>7 he's answered it.</p> <p>8 MS. CANNELLA: Great.</p> <p>9 Q. (Mr. Hill) Hold on. Let me share</p> <p>10 my screen. Can you see my screen?</p> <p>11 A. Yes, sir.</p> <p>12 Q. All right. This is your June 14,</p> <p>13 2024 letter to Ms. Cannella that's titled</p> <p>14 rebuttal report. Is that okay if we call it</p> <p>15 rebuttal report?</p> <p>16 A. Yes, sir. Thank you.</p> <p>17 Q. All right. And in connection with</p> <p>18 preparing this report, the additional material</p> <p>19 you received was the report and deposition of</p> <p>20 Mr. Grimes and Mr. Crosby, their file --</p> <p>21 Grimes's file material, and the scanned data</p> <p>22 photos and video data from the crash test. Is</p> <p>23 that the full list of material that was new</p>	<p style="text-align: right;">Page 148</p> <p>1 Q. And I'm just asking how you -- how</p> <p>2 do you quantify that? What do you mean by</p> <p>3 total crush, and how did you make that</p> <p>4 determination?</p> <p>5 A. This PowerPoint that goes through,</p> <p>6 we went level by level and sliced the -- sliced</p> <p>7 the car into levels. And we actually</p> <p>8 quantified it at each level. And at every</p> <p>9 level there was more crush except for, you</p> <p>10 know, at that frame level.</p> <p>11 Q. Right. And so that's just a</p> <p>12 summation of your level-by-level analysis of</p> <p>13 the two crushes.</p> <p>14 A. Yep.</p> <p>15 Q. That's what I'm trying to get.</p> <p>16 A. Yes, sir. Thank you.</p> <p>17 Q. All right. And did you quantify</p> <p>18 an actual amount -- or you call it</p> <p>19 significantly less. Did you actually come up</p> <p>20 with a number?</p> <p>21 A. No. Remember, Grimes didn't make</p> <p>22 any measurements. We didn't either. We did a</p> <p>23 visual comparison at the levels, and we did it</p>
<p style="text-align: right;">Page 147</p> <p>1 that you used in generating this rebuttal</p> <p>2 report?</p> <p>3 A. Yes, sir.</p> <p>4 Q. Okay.</p> <p>5 A. It says Grimes's file materials</p> <p>6 too. I don't know if you listed that. But</p> <p>7 that -- that lists everything.</p> <p>8 Q. I did. I meant to if I didn't.</p> <p>9 A. All right. We're good.</p> <p>10 Q. All right. Under your observation</p> <p>11 section, your first point is the total crush on</p> <p>12 the test Escape is significantly less than in</p> <p>13 the accident. How do you define total crush?</p> <p>14 A. We did a PowerPoint based on that.</p> <p>15 In other words, you'd look at the -- I mean,</p> <p>16 clearly the crush at the bumper level in the</p> <p>17 crash test is going to be more than in the</p> <p>18 accident because there was bumper-to-bumper</p> <p>19 contact. So you know, at the -- at the</p> <p>20 critical level, which is the frame level,</p> <p>21 there's more crush. But if you look at the</p> <p>22 whole car, there's -- there's more crush in the</p> <p>23 accident because the frame wasn't engaged.</p>	<p style="text-align: right;">Page 149</p> <p>1 so everybody could see it. So no, I -- I don't</p> <p>2 know that I've done a number. I don't remember</p> <p>3 a number. If I did, it would be in here</p> <p>4 somewhere.</p> <p>5 Q. And that same applies to item</p> <p>6 number two, you don't know if -- is that right?</p> <p>7 A. Right. We did the drawings. We</p> <p>8 can see it in the drawings. Yeah. Let me --</p> <p>9 let me go down here and look at the drawings.</p> <p>10 Maybe we did quantify it on the drawings. So</p> <p>11 I'm running down in the report. Yeah. Sorry.</p> <p>12 Let me make it so I can move it a little</p> <p>13 quicker.</p> <p>14 Nope. I don't think we did a number unless</p> <p>15 it's stated in a paragraph somewhere.</p> <p>16 Q. All right. Item number three</p> <p>17 states, the slope of the crash pulse was</p> <p>18 greater in the test vehicles than the accident</p> <p>19 vehicles. That's also true of your HVE</p> <p>20 simulation. Correct?</p> <p>21 A. Well, yeah. Because the vehicle</p> <p>22 is stronger. The -- the Escape is stronger at</p> <p>23 the frame level.</p>

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<p style="text-align: right;">Page 150</p> <p>1 Q. And the fact that there is -- the 2 slope of the crash pulse was different -- was 3 different between your simulation and the 4 accident vehicles doesn't invalidate your 5 simulation, does it? 6 A. No. Because he -- he simulated 7 it -- he did a crash test for a different 8 accident than our accident. In other words, 9 they're different accidents. He did one with 10 the truck going too far to the left. And we 11 did one that represents the subject accident. 12 Q. Right. But in both instances, the 13 slope of the crash pulse was greater than the 14 accident vehicles. And that fact did not make 15 your simulation invalid? 16 A. No. No, it doesn't. That -- that 17 fact alone just tells you that the Escape is 18 stronger, that the Escape at the bumper 19 level -- even with this advantage by moving the 20 vehicles 45 percent further to the left, the 21 Escape still is stronger and resists crushing 22 more. 23 Q. Right. So there's nothing</p>	<p style="text-align: right;">Page 152</p> <p>1 contact? 2 A. Well, there was full 3 bumper-to-bumper -- there was bumper-to-bumper 4 contact. And the frame level structure of the 5 Escape remained in contact with the frame level 6 bumper level of the F-250 the whole time. I 7 show it in photographs and PowerPoints. 8 Q. Was there any point where the 9 F-250 bumper was on top of or beyond the level 10 of the bumper of the -- of the Escape in the 11 test? 12 A. Well, we're now getting into -- 13 because of the way the test was run, there's -- 14 there's problems with it. But when we look at 15 the structure, I would say no. If you want to 16 argue about the bumper, where the bumper was 17 able to engage the -- the -- the tow hook of 18 the F-250, it stayed engaged the whole time. 19 And where the frame was able -- of the Escape 20 was able to engage the bumper, it stayed 21 engaged the whole time. 22 Q. All right. And item number six, 23 when you talk about the F-250's bumper striking</p>
<p style="text-align: right;">Page 151</p> <p>1 unexpected about item number three with either 2 test? 3 A. There's nothing what? 4 MS. CANNELLA: There's nothing 5 what? 6 MR. HILL: Unexpected. 7 MS. CANNELLA: I object to the 8 form of the question as vague. 9 Q. I think you already answered it. 10 Right? 11 A. Okay. 12 Q. All right. Item number four, when 13 comparing the crash test to the accident, you 14 said the vehicle-to-vehicle force was greater 15 in the test than in the accident. 16 A. Yes. 17 Q. Okay. Is that also true about 18 your HVE simulation? 19 A. Yes. 20 Q. Okay. We -- and I think we've 21 covered this. But item five, the basis of your 22 opinion that the F-250 did not override in the 23 test is because there was bumper-to-bumper</p>	<p style="text-align: right;">Page 153</p> <p>1 the test Escape's bumper flush, was the impact 2 from the F-250, was it the secondary energy 3 absorption brackets that impacted the Escape's 4 bumper or was it actually the F-250 bumper? 5 A. It was the -- it was -- the bumper 6 was flush to -- the two bumpers were flush to 7 each other. You know, the tow hook sticks out 8 a little bit. But no, we're not talking about 9 the seize brackets engaging that level -- that 10 frame level. They were down below that. It 11 was the bumper-to-bumper level that was flush. 12 Q. Right. And so that's what I 13 wanted to clarify. In the test the seize 14 brackets didn't have any impact on the 15 accident -- on the crash test. Is that true? 16 A. Well, leaving the offset problem 17 out, the seize brackets were not called upon in 18 the test -- yeah, they were kind of called upon 19 because of the offset, so I can't say that. 20 Yeah. Because of the offset, they were called 21 upon on the driver side. 22 Q. All right. Number seven says the 23 test resulted in less rear seat deflection and</p>

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<p style="text-align: right;">Page 154</p> <p>1 movement than in the accident. Do you agree</p> <p>2 that there was rear seat deflection in the</p> <p>3 crash test?</p> <p>4 MS. CANNELLA: Objection.</p> <p>5 Which -- which seat are we talking about?</p> <p>6 MR. HILL: Well, I'm using what he</p> <p>7 says up here, less rear seat deflection. So</p> <p>8 I'm talking about whatever he's talking about.</p> <p>9 He -- you tell me.</p> <p>10 A. Well -- well, less doesn't mean</p> <p>11 there was some.</p> <p>12 Q. And that's what I'm getting at.</p> <p>13 A. Well, let me answer. Grimes</p> <p>14 agrees with this. I think from my memory there</p> <p>15 was some. But he didn't measure the position</p> <p>16 of the seat and report the relative positions</p> <p>17 of the seat start to finish of his crash test.</p> <p>18 So my memory is that there was -- that I think</p> <p>19 there was some, but it was remarkably less than</p> <p>20 in the accident. But I don't know. So that's</p> <p>21 my memory right now. But the photos show what</p> <p>22 they show.</p> <p>23 Q. Okay. And you haven't examined</p>	<p style="text-align: right;">Page 156</p> <p>1 was pushed in enough to actually impact the</p> <p>2 rear seat in the crash?</p> <p>3 A. Yeah. Well, the cameras that were</p> <p>4 supposed to show that didn't function in the</p> <p>5 crash test. You know, the cameras moved. So</p> <p>6 we don't -- we're kind of deprived of some of</p> <p>7 the information that could have been had. I</p> <p>8 haven't thought to -- I don't believe they did,</p> <p>9 but I don't -- as I sit here, I haven't been</p> <p>10 able to do that analysis either.</p> <p>11 Q. Okay. So as we sit here today, if</p> <p>12 I understand you, you don't know whether the</p> <p>13 rear hatch of the Escape impacted the second</p> <p>14 row seat back in the crash test?</p> <p>15 A. In the crash test, no. What I</p> <p>16 tried to use to look for that type of stuff, I</p> <p>17 think there's two video cameras, and neither</p> <p>18 one of them functioned.</p> <p>19 Q. Do you know whether there was any</p> <p>20 gap after the crash test between the rear hatch</p> <p>21 and the rear seat?</p> <p>22 A. My recollection is there is, yes,</p> <p>23 sir.</p>
<p style="text-align: right;">Page 155</p> <p>1 the crash test to determine whether there was</p> <p>2 seat deflection in the crash test or how much</p> <p>3 seat deflection per, if there was?</p> <p>4 A. Well, if the floor pane moves, it</p> <p>5 would be some movement. So maybe I can say</p> <p>6 there was some movement in the seat. But I</p> <p>7 don't remember if there was deflection in the</p> <p>8 seat relative to the attachment points and</p> <p>9 whatnot. But it certainly wasn't -- I mean, in</p> <p>10 the accident the rear seat is tilted way</p> <p>11 forward. And in the crash test, it's still</p> <p>12 reasonably the same reclined level and that</p> <p>13 type of stuff. So the items will speak for</p> <p>14 itself.</p> <p>15 But you know, there -- there probably was</p> <p>16 some shifting where the seat is just due to the</p> <p>17 crush at the floor pan level and other -- other</p> <p>18 things. Regardless of the reasons why, there</p> <p>19 was less in the crash test than in the</p> <p>20 accident. And that's what this says.</p> <p>21 Q. All right. A related question you</p> <p>22 mentioned the deformation of the floor pan. Do</p> <p>23 you know whether the rear hatch of the Escape</p>	<p style="text-align: right;">Page 157</p> <p>1 Q. All right. Did you -- do you have</p> <p>2 a photograph or whatever that shows that? Do</p> <p>3 you -- what proof do you have that there was a</p> <p>4 gap between the hatch and the rear seat?</p> <p>5 A. Well, when we did the slice, there</p> <p>6 was a gap, a space between the hatch and the</p> <p>7 rear seat.</p> <p>8 Q. Was there a space between the</p> <p>9 hatch and the rear seat in the subject Escape</p> <p>10 after the accident?</p> <p>11 A. Yes.</p> <p>12 Q. And did you compare the size of</p> <p>13 that space from the subject accident to</p> <p>14 whatever space that you say existed in the</p> <p>15 crash Escape -- in the crash test Escape?</p> <p>16 Sorry.</p> <p>17 A. No, I haven't -- I haven't done</p> <p>18 that.</p> <p>19 Q. Okay. Do you have any opinions</p> <p>20 with regard to whether the crash test could</p> <p>21 have resulted in injury to Cohen Bryson if he</p> <p>22 had been in that vehicle at the time of the</p> <p>23 test?</p>

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<p style="text-align: right;">Page 158</p> <p>1 MS. CANNELLA: Objection. Outside</p> <p>2 the scope of his expertise and testimony.</p> <p>3 MR. HILL: Well, that's exactly</p> <p>4 what I'm trying to establish.</p> <p>5 Q. That's outside of your expertise.</p> <p>6 Right?</p> <p>7 A. Yes. I'm not talking about</p> <p>8 injuries in the crash test. No, sir.</p> <p>9 Q. Right. That's all I was trying to</p> <p>10 establish is that you're not an expert in</p> <p>11 biomechanics. And you don't intend to give any</p> <p>12 opinions as to whether the intrusion, crush,</p> <p>13 however you want to describe it that occurred</p> <p>14 in the crash test, would or would not have</p> <p>15 caused an injury to Cohen Bryson?</p> <p>16 A. Right.</p> <p>17 Q. Okay. If we go down in this</p> <p>18 report a little bit -- let's see here -- give</p> <p>19 me one second. Sorry. Item number two on the</p> <p>20 page right now, you talk about test did not</p> <p>21 provide markers to record what the test vehicle</p> <p>22 offset was. What type of markers would you</p> <p>23 have expected to be on the vehicle?</p>	<p style="text-align: right;">Page 160</p> <p>1 the vehicle?</p> <p>2 A. Right. Put a piece of tape where</p> <p>3 it's likely to leave a mark or put a piece of</p> <p>4 tape, you know, so that you get good transfer</p> <p>5 of the color and that type of stuff.</p> <p>6 Q. Okay.</p> <p>7 A. All kinds of ways to do it. But</p> <p>8 the best is a pointer type device that -- that</p> <p>9 leads. Then you can see in the video -- you'd</p> <p>10 put a target on the Escape. You'd put a</p> <p>11 pointer on the -- on the F-250. And in the</p> <p>12 video you -- and it's scale, so when it</p> <p>13 touches, you know -- and that's before anything</p> <p>14 else touches. You know exactly the</p> <p>15 orientation.</p> <p>16 Q. Right. Well, item number three</p> <p>17 you talk about Grimes, you know, he testified</p> <p>18 he didn't put the centerline tape on. But you</p> <p>19 did read Mr. Crosby's deposition, right, where</p> <p>20 he described that it was on the center of the</p> <p>21 vehicle?</p> <p>22 A. Yes.</p> <p>23 Q. And you have no reason to dispute</p>
<p style="text-align: right;">Page 159</p> <p>1 A. Crosby describes what he typically</p> <p>2 does to document it. He didn't show a photo of</p> <p>3 it, but he could have used whatever he used</p> <p>4 because I'm sure it would have been good</p> <p>5 enough. In the past we've put a stick or</p> <p>6 something coming out the front, something that</p> <p>7 is brittle and will break and, you know, that</p> <p>8 will leave a mark. We've -- we've put paint on</p> <p>9 the vehicles. One of the easiest things to do</p> <p>10 is put -- put marks on the ground so that the</p> <p>11 overhead camera and the other cameras can see</p> <p>12 if the vehicle goes along those marks. And if</p> <p>13 it doesn't it can easily tell how far off the</p> <p>14 mark it is. So it basically uses a simple</p> <p>15 series of targets, markers, indentures, paint</p> <p>16 transfer, things like that. Even tape -- even</p> <p>17 tape will -- will transfer so you can tell</p> <p>18 where it is, any one of those. Or put the</p> <p>19 cameras where you can do the work.</p> <p>20 Q. And when you say tape, you're not</p> <p>21 talking about the centerline tape. You're</p> <p>22 talking about a tape that would leave a mark</p> <p>23 that would be on the edge of -- the front of</p>	<p style="text-align: right;">Page 161</p> <p>1 that the centerline tape was not on the</p> <p>2 centerline of the test vehicle?</p> <p>3 A. That's agreed.</p> <p>4 Q. Okay. On the next pages, which is</p> <p>5 bates 9401, the paragraph beginning on based on</p> <p>6 Grimes's deposition, you make the point that in</p> <p>7 your opinion that Mr. Grimes should have</p> <p>8 crashed a lifted Escape -- a lifted truck into</p> <p>9 an Escape in order to establish the speed of</p> <p>10 the truck in the accident. Can you explain</p> <p>11 that opinion? How could Mr. Grimes have</p> <p>12 established the speed of the truck in the</p> <p>13 accident by running a crash test with a lifted</p> <p>14 F-250?</p> <p>15 A. He gives -- this is -- he gives</p> <p>16 his speed range of 43.9 to -- into the low 50s</p> <p>17 based on potential for braking and whatnot. I</p> <p>18 mean, it seems like he's uncertain about the</p> <p>19 speed. If he doesn't know the speed, he ought</p> <p>20 to establish his own speed.</p> <p>21 Q. Okay. Well, that's -- I'll go</p> <p>22 back to my question. But let's talk about</p> <p>23 that. Do you recall in his deposition that he</p>

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<p style="text-align: right;">Page 162</p> <p>1 stated that the extremes using the potential 2 braking at 0.5 seconds would be 43.9 at the 3 lowest end if you have assumed full braking 4 power at exactly 0.5 seconds. And then he had 5 a high-end range that would assume that you 6 didn't have full braking and you had braking 7 just minimal right before the impact, and it 8 just provided him a preliminary range depending 9 upon various hypothetical braking situations. 10 Is that a fair description of his testimony as 11 you understand it? 12 A. That's a good start for a 13 conversation. Yes, sir. 14 Q. Right. But we know -- and you 15 agree that -- and he even said he didn't 16 believe that braking occurred. And that he 17 believed that that accident occurred at 50 or 18 51 miles an hour, which is consistent with your 19 belief as to what the speed of the F-250 was at 20 the time of the impact. Is that correct? 21 A. I think so. There's a lot in it. 22 Can you make sure I've got it all? 23 Q. Sure. Well, we don't have a</p>	<p style="text-align: right;">Page 164</p> <p>1 He is disadvantaging -- 2 Q. And -- 3 A. He -- 4 Q. Oh, sorry. 5 A. He is disadvantaging the Escape by 6 a full five miles per hour. So that's what 7 this is saying here. If -- if his range was 8 43.9 to 49.9 or 43.9 to 50 or whatever it is, 9 he can't compare a 43.9 mile per accident to a 10 51 mile per hour crash test if he's doing -- if 11 he's trying to seek the equation -- the answer 12 he says he's trying to seek which is, as he 13 says, clearly I'm trying to seek to show that a 14 lifted vehicle doesn't provide more crush than 15 an unlifted vehicle. Well, we use 51 in the 16 simulation, which is conservatively high 17 because we know the driver was on the brakes. 18 I think 51 is probably a good number though. 19 But if his -- if his opinion is that it may 20 have been as slow as 44, then he needs to -- or 21 43.9 -- if he's -- 22 Q. Did he ever give the opinion -- 23 A. -- going to compare -- if he's</p>
<p style="text-align: right;">Page 163</p> <p>1 dispute here. You used 51 miles per hour as 2 the impact speed in every one of your 3 simulations. 4 A. Uh-huh. 5 Q. Correct? 6 A. Yes. 7 Q. All right. And so you don't have 8 any criticism of his using 49.9 in the crash 9 test? 10 A. I actually -- based on his work, 11 yes. I'm looking -- I'm using 51 and getting 12 more crush. If -- if the -- if the vehicle was 13 really going 44, then I'm -- I'm using a worst 14 case scenario in my simulation. But if his 15 opinion is that the lifted truck -- that an 16 unlifted truck produces the same amount of 17 crush as a lifted truck -- or even more is 18 actually what his opinion is -- then he needs 19 to make sure he's got the speeds right. 20 See, because what if the -- what if 21 according to him the accident was 44 miles an 22 hour. And is it fair to really compare it to a 23 crash test that he ran at 49.9 miles an hour?</p>	<p style="text-align: right;">Page 165</p> <p>1 going to compare apples and apples, he just 2 ought to compare apples and apples. 3 Q. Did he ever give the opinion that 4 he thought the accident occurred at 44 miles 5 per hour? 6 A. Well, I thought he said the 7 accident may have been as low as 44 based on 8 one of his calculations. But you know, if I 9 misread that, I misread that. 10 Q. Okay. Well, back to my other 11 question, and that is about your statement that 12 he could have established the speed of the 13 truck in the accident by crashing a lifted 14 truck. So I don't understand that. How could 15 he establish the speed of the truck in the 16 accident by first testing a lifted truck? 17 A. Okay. Well, he's the one trying 18 to compare -- try to say that lifted versus 19 unlifted doesn't matter. The way to do that is 20 you do two tests at the same speed, lifted and 21 unlifted so you only have one variable that's 22 changing, and you can answer that question. 23 He -- he is comparing his crash test to the</p>

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<p style="text-align: right;">Page 166</p> <p>1 accident under the belief that he's hitting 2 them at the same speed, which he -- the way I 3 read his work or looked at his work, he didn't 4 fully establish that. 5 Q. So he would not -- and again, if I 6 understand your answer, it's based upon your 7 assumption as to the purpose of his test. I'm 8 trying to figure out -- so he couldn't 9 establish the actual speed that the accident 10 truck was traveling by running any type of 11 test. He can't actually establish that speed? 12 A. Sure, he can. He can -- if he 13 wants to do a crash test with a lifted truck, 14 he can demonstrate at 51 miles an hour. He can 15 demonstrate that that matches the crash pulses 16 and everything and then he can lower the truck 17 and run the same impact again. And then he'll 18 have a direct comparison as long as he gets the 19 offset right. 20 Q. So you're saying that he should 21 have run the accident with a lifted truck at 51 22 miles per hour and then compared those results 23 to the black box data in the actual accident.</p>	<p style="text-align: right;">Page 168</p> <p>1 show whether -- or what the difference in crush 2 would be between the actual accident and your 3 simulation, you have to run them both at the 4 same speed? 5 A. Well, not necessarily because 6 we -- we -- we know the driver of the truck was 7 on his brakes at impact because I think we have 8 that indicated. So he's not going to speed up. 9 And when we ran our simulation, when we dropped 10 it, we weren't even close. In other words, 11 there was a big discrepancy there in the amount 12 of crush. So within the level of braking, all 13 that would do is -- if we reduce the speed 14 below 51, that would just reduce the amount of 15 crush. So it wouldn't change any of my 16 opinions. My opinions would be -- my opinions 17 are robust. But my opinions are different 18 slightly than his. 19 The way he's going about it, his opinion 20 is -- maybe we just ought to find it in his 21 depo. I wrote it down where he gives the 22 purpose of it was to show that an unlifted 23 truck has the -- that the lift doesn't increase</p>
<p style="text-align: right;">Page 167</p> <p>1 Is that what you're saying? 2 A. Well, he could have done that to 3 know the exact speed. But if he -- if he did 4 both at 51, both the lifted truck and the 5 unlifted truck and the only thing he varied was 6 the lift, then we would know the effect of the 7 lift. He says very clearly in his 8 deposition -- and I'm working off of memory 9 here. But it basically says, hey, I did this 10 to show that a lifted truck doesn't do any more 11 damage than an unlifted truck or whatever he 12 said; it doesn't have more crush or -- and so I 13 remember that quote in there. My words aren't 14 going to be right, but I'm really close. 15 So he's actually -- in order to do that, 16 he's got to -- in order to say that an unlifted 17 truck produces the same or more crush than a 18 lifted truck, he needs to make sure that he's 19 got the speed of the two trucks the same. And 20 I will point here that regardless of the 21 offset, he -- he didn't seem to do that. 22 Q. Wouldn't that same theory apply to 23 your simulation, in order for the simulation to</p>	<p style="text-align: right;">Page 169</p> <p>1 or decrease or doesn't change the crush on a 2 car. Well, to do that, he's -- he's got to 3 have both pieces of test data to do it. He's 4 only got one. 5 Q. And that's based upon your 6 interpretation or your quote of what he -- you 7 say he's trying to do? 8 A. Well, it's -- let me find the 9 quote. Yes. Yes, you're right. If you don't 10 want me to find it, I won't. But yes. 11 Q. I'm not asking you to find it. 12 I'm just saying your opinion is based upon that 13 interpretation of the purpose of the test? 14 A. It's based on what he said, yes. 15 I -- yes. 16 Q. And I think this relates to this 17 opinion. And I want to make sure that I 18 understand it. The reason that you didn't do 19 what you're saying he should have done, which 20 is run an HVE simulation of the actual accident 21 to compare it to the black box data is because 22 you don't believe HVE is robust enough to 23 properly model if it's not a bumper-to-bumper,</p>

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<p style="text-align: right;">Page 170</p> <p>1 structure-to-structure accident.</p> <p>2 A. Okay.</p> <p>3 Q. Is that fair?</p> <p>4 A. I heard the last part of your</p> <p>5 question. So I really understand it now. I</p> <p>6 think what you're asking is -- ask it again</p> <p>7 because I'm -- the first part was confusing,</p> <p>8 and the last part I thought clarified it.</p> <p>9 Please ask it again.</p> <p>10 Q. Okay. Sure. The -- you're saying</p> <p>11 that one way that he could compare apples to</p> <p>12 apples is to first run a lifted test and</p> <p>13 compare the delta-V's and the crush or whatever</p> <p>14 to the actual accident. And it would tell him</p> <p>15 whether he's got the speed right to compare it</p> <p>16 to the real accident. Is that -- is that --</p> <p>17 that would be one thing you would benefit from</p> <p>18 by running an actual crash test with a lifted</p> <p>19 vehicle in the same configuration as the actual</p> <p>20 crash. Right?</p> <p>21 A. Well, you're putting me in an</p> <p>22 equation and the use -- I'm using his file. He</p> <p>23 calculated 43.9. If his -- if the potential</p>	<p style="text-align: right;">Page 172</p> <p>1 A. Yes. That's one of the things.</p> <p>2 Q. Right. And another reason would</p> <p>3 be -- I want to make sure I understand it -- is</p> <p>4 that HVE would not be appropriate for a lifted</p> <p>5 accident because HVE is designed to study</p> <p>6 bumper-to-bumper, structure-to-structure type</p> <p>7 incidents. And that would be another reason</p> <p>8 why you wouldn't use HVE to simulate the actual</p> <p>9 accident?</p> <p>10 A. It means you'd have to do some</p> <p>11 more work. It doesn't -- I think that there's</p> <p>12 justification for trying to use it. But it</p> <p>13 would be -- it would be -- you would have to</p> <p>14 start that whole process and do that. And you</p> <p>15 know, that would -- that would be a -- I don't</p> <p>16 know what the value would show anyways. I</p> <p>17 don't know what the value would show because we</p> <p>18 have the -- we have the accident. But I don't</p> <p>19 know -- I don't know that we could use HVE for</p> <p>20 that, for the subject accident the way it was</p> <p>21 hit.</p> <p>22 We can use it to study a frame -- a bumper</p> <p>23 level hit. But you would have to do a lot of</p>
<p style="text-align: right;">Page 171</p> <p>1 accident speed is as low as 44 in his work and</p> <p>2 then he's going to go crash it at 49.9, then</p> <p>3 that's -- then that's not reasonable. That's</p> <p>4 his work. Not mine.</p> <p>5 Q. I'm just -- I'm not going into</p> <p>6 that.</p> <p>7 A. Okay.</p> <p>8 Q. I'm saying that you're critical of</p> <p>9 him for not running first a crash with a lifted</p> <p>10 truck. Right?</p> <p>11 A. The way he opines, yes.</p> <p>12 Q. Right. And you also didn't run a</p> <p>13 simulation with a lifted truck in it. Right?</p> <p>14 You've never run a simulation with a lifted</p> <p>15 truck. Correct?</p> <p>16 A. That's correct. That's correct.</p> <p>17 Q. And I would think there's two</p> <p>18 reasons. One would be that you don't need it</p> <p>19 because you used 51, which is kind of like the</p> <p>20 maximum speed in your opinion. So you don't</p> <p>21 need to determine the actual speed because</p> <p>22 that's worst case scenario or the most</p> <p>23 conservative approach?</p>	<p style="text-align: right;">Page 173</p> <p>1 work to see if you wanted to or could simulate</p> <p>2 the actual accident because of the difference</p> <p>3 in elevations. But there's papers out there</p> <p>4 that says it's -- you know, that -- that it</p> <p>5 could be done for that. But it's just -- it</p> <p>6 wouldn't be -- I wouldn't use the stock stuff</p> <p>7 out of the -- the default stuff out of the</p> <p>8 program.</p> <p>9 Q. And you can't cite to me any of</p> <p>10 those papers that say it would be appropriate</p> <p>11 to use in a lifted truck situation as we sit</p> <p>12 here today?</p> <p>13 A. No. I'm saying I think he said</p> <p>14 you could do it. But you couldn't do it in the</p> <p>15 stock condition. You would have to -- I mean,</p> <p>16 stock meaning the default conditions. You</p> <p>17 would have to start manipulating the program to</p> <p>18 make it perfect. And we didn't -- you know,</p> <p>19 that's a whole new problem.</p> <p>20 Q. Right. But you can't cite to any</p> <p>21 of those papers that say that?</p> <p>22 A. No. That's knowledge I have in</p> <p>23 my -- in my past.</p>

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<p>1 Q. Yeah.</p> <p>2 A. But no, I didn't bring those</p> <p>3 papers.</p> <p>4 Q. All right. Do you know what type</p> <p>5 of modifications you would have to make in</p> <p>6 order to run -- modifications from the stock</p> <p>7 vehicles in order to run that type of</p> <p>8 simulation in HVE?</p> <p>9 A. I used the word stock. That was</p> <p>10 my mistake. Default. Yeah, you're now --</p> <p>11 you're -- that would take some real work to do.</p> <p>12 Q. Right.</p> <p>13 A. But I don't -- you know, as I sit</p> <p>14 here, I'm not -- I'm not saying you can do it.</p> <p>15 I'm not saying absolutely the papers say you</p> <p>16 can do it. I'm saying I think there's papers</p> <p>17 out there that indicate it can be done. But it</p> <p>18 would not -- it would be -- it would be quite</p> <p>19 an effort.</p> <p>20 Q. Would -- do you -- would you know</p> <p>21 how to do it?</p> <p>22 A. I'm actually sure that if it could</p> <p>23 be done, I could. But I'm not -- I don't know</p>	<p>1 You don't --</p> <p>2 MR. HILL: Oh, no problem. We can</p> <p>3 take a break at any time.</p> <p>4 THE WITNESS: Okay. I apologize.</p> <p>5 MR. HILL: We're getting through</p> <p>6 it now. We're -- we're on the same page now.</p> <p>7 We're doing better.</p> <p>8 THE WITNESS: Okay. I agree.</p> <p>9 THE VIDEOGRAPHER: The time is</p> <p>10 1:57 p.m. We are off the video record.</p> <p>11 (A break was taken.)</p> <p>12 THE VIDEOGRAPHER: The time is</p> <p>13 2:07 p.m. We are back on the video record.</p> <p>14 Q. (Mr. Hill) All right. Moving</p> <p>15 ahead to the offset portion of your -- what did</p> <p>16 you call it again -- rebuttal report. All</p> <p>17 right. So that I can understand this, you</p> <p>18 indicate that you used three methods to</p> <p>19 determine the offset in the crash. Two of them</p> <p>20 are based upon the Ford logo imprints, and one</p> <p>21 of them is based on the crash testing. Is that</p> <p>22 fair? Is that correct?</p> <p>23 A. Those are the three methods that</p>
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<p>1 that it can be done. I mean, in other words,</p> <p>2 it's not -- it's just a -- it's just a physics</p> <p>3 problem. But I don't know -- I mean, I think</p> <p>4 I'm -- but that work hasn't been done, just</p> <p>5 like the other thing you asked me about. I</p> <p>6 can't even talk about starting it right now.</p> <p>7 Q. Yeah. I'm not talking about</p> <p>8 how -- I'm just saying do you know how to do it</p> <p>9 without having to --</p> <p>10 A. Well, it hasn't -- it hasn't been</p> <p>11 done yet. So I can't say I know how to do it.</p> <p>12 Q. Okay. Would it involve modifying</p> <p>13 the stiffness coefficient for the different</p> <p>14 areas of the rear of the Escape, meaning you'd</p> <p>15 have to input a different stiffness coefficient</p> <p>16 for the rear hatch versus the window versus the</p> <p>17 bumper? Is that kind of the process it would</p> <p>18 take?</p> <p>19 A. I don't know. I'd have to -- I</p> <p>20 haven't done it yet.</p> <p>21 Q. All right.</p> <p>22 THE WITNESS: I do hate to ask,</p> <p>23 but I need to run down the hall and run back.</p>	<p>1 we did independent of Grimes's work. Grimes</p> <p>2 actually has work that shows the offset as</p> <p>3 well. It doesn't require any rebuttal. It</p> <p>4 just requires showing it. So yes, as far as</p> <p>5 our work, that's what this shows.</p> <p>6 Q. And I was just reading straight</p> <p>7 from the paragraphs here that begins with of</p> <p>8 the three methods.</p> <p>9 A. Yeah.</p> <p>10 Q. Yeah.</p> <p>11 A. I'm clarifying to make sure that</p> <p>12 everything is understood.</p> <p>13 Q. Right. And the first method</p> <p>14 involves producing a photomodel of the test</p> <p>15 vehicle and the accident vehicle, using a photo</p> <p>16 where the logo imprint is visible. And then</p> <p>17 you show in figure 3A a crash test photo of --</p> <p>18 with a yellow line around the logo area -- the</p> <p>19 logo imprint area. Is that fair?</p> <p>20 A. Yes.</p> <p>21 Q. And while Ms. Cannella was</p> <p>22 mentioning exhibits, I would like to attach --</p> <p>23 and I should have done this at the beginning --</p>

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<p style="text-align: right;">Page 178</p> <p>1 as I think Exhibit 2 this June 14, 2024</p> <p>2 rebuttal report.</p> <p>3 All right. And then figure 3B is from Jeff</p> <p>4 Kidd's inspection after the incident where</p> <p>5 again you've sort of outlined what you believe</p> <p>6 shows the logo imprint from the Ford logo on</p> <p>7 the F-250?</p> <p>8 (Defendant's Exhibit Number 2</p> <p>9 is marked for identification.)</p> <p>10 A. Yes.</p> <p>11 Q. All right. And figure four is</p> <p>12 where you used photomodels where you -- and</p> <p>13 correct me if I'm wrong. You indicate a point</p> <p>14 on the photo, and then the PhotoModeler uses</p> <p>15 its magic to determine a 3D distance between</p> <p>16 those two points?</p> <p>17 A. Yes.</p> <p>18 Q. Okay. And so the distance it</p> <p>19 calculates depends upon the start and endpoints</p> <p>20 that you indicate on the photo?</p> <p>21 A. Right.</p> <p>22 Q. Okay. And figure 5B, same thing,</p> <p>23 that's PhotoModeler Premium showing the</p>	<p style="text-align: right;">Page 180</p> <p>1 tow hooks, there are other items that stuck out</p> <p>2 farther than the logo on the front rail?</p> <p>3 A. Forgive me. I was answering with</p> <p>4 respect to the accident. You may have asked</p> <p>5 about the test. I -- I don't know. I mean --</p> <p>6 Q. I started with the accident. But</p> <p>7 wouldn't the same thing be true of the crash</p> <p>8 test?</p> <p>9 A. Well, the crash test is a little</p> <p>10 further because you've actually got bumper to</p> <p>11 bumper.</p> <p>12 Q. Right.</p> <p>13 A. But in the accident -- in the</p> <p>14 accident you're -- I mean, you're not hitting</p> <p>15 bumper to bumper, so the logo is -- is, you</p> <p>16 know, twice as close -- let's put it that</p> <p>17 way -- as in the test. Thanks.</p> <p>18 Q. Right. But either way though,</p> <p>19 it's -- the logo is not the first thing to</p> <p>20 impact the Escape?</p> <p>21 A. Yes.</p> <p>22 Q. That's all I was trying to</p> <p>23 establish.</p>
<p style="text-align: right;">Page 179</p> <p>1 distance between the two points that you marked</p> <p>2 on the test Escape.</p> <p>3 A. Yes.</p> <p>4 Q. Is that correct?</p> <p>5 A. Yes.</p> <p>6 Q. And again, that's figure, you</p> <p>7 know, 5A and 5B showing those distances on the</p> <p>8 subject Escape and the crash Escape. Those</p> <p>9 measurements are dependent upon the points you</p> <p>10 indicate you want the software to measure to</p> <p>11 and from?</p> <p>12 A. Correct.</p> <p>13 Q. Okay. Now, the Ford logo on the</p> <p>14 F-250, you would agree, was not the first part</p> <p>15 of the F-250 to impact the Escape in the</p> <p>16 subject accident?</p> <p>17 A. I do. It was really, really -- it</p> <p>18 was really, really close though because, you</p> <p>19 know --</p> <p>20 Q. Yeah.</p> <p>21 A. -- it was definitely not the first</p> <p>22 point of contact.</p> <p>23 Q. I agree. But the bumper or the</p>	<p style="text-align: right;">Page 181</p> <p>1 A. Right.</p> <p>2 Q. And the logo itself is -- is not</p> <p>3 flat. Do you agree with that?</p> <p>4 A. Yeah. It's got a little convex to</p> <p>5 it.</p> <p>6 Q. Right. It's a little -- right.</p> <p>7 So the -- like the center of the logo is going</p> <p>8 to stick out a little bit more than the edges?</p> <p>9 A. Correct.</p> <p>10 Q. Right. And so if you look at --</p> <p>11 I'll use one of your photos here if I can find</p> <p>12 one that's clear. I don't seem to have a large</p> <p>13 picture.</p> <p>14 A. We do. There you go.</p> <p>15 Q. This is the logo on the Escape,</p> <p>16 which you agree is a different size than the</p> <p>17 logo on the F-250?</p> <p>18 A. It is.</p> <p>19 Q. But it has the similar concave</p> <p>20 shape -- or convex shape you just mentioned.</p> <p>21 Right?</p> <p>22 A. Yes, sir.</p> <p>23 Q. And so you would agree that the O</p>

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<p style="text-align: right;">Page 182</p> <p>1 and the R in Ford are -- I'm not making you -- 2 asking you to be exact. But they're towards 3 the middle of the logo? 4 A. Yes. 5 Q. And so they would be sticking out 6 more than the edges of the logo? 7 A. At first contact, yes. 8 Q. Yes. Sure. All right. Basically 9 the closer you get to the center of the logo, 10 the more convex the logo is. Is that true? 11 A. I think I know what you mean. 12 Yes. 13 Q. Okay. All right. Let me stop 14 sharing for a second and see if I can find 15 something here. 16 MR. HILL: Okay. We need to take 17 like a one-minute break. Don't leave your 18 seat. I just -- I'm having some technical 19 difficulties accepting my files. Can we just 20 go off the record for -- it won't take more 21 than a minute. 22 THE WITNESS: That will work. 23 THE VIDEOGRAPHER: The time is</p>	<p style="text-align: right;">Page 184</p> <p>1 photos of the crash test Escape, locate the -- 2 the location of any of the letters in the word 3 Ford as part of your analysis? 4 A. A is always the easiest to find. 5 Q. The what? I'm sorry. 6 A. The A is the easiest to see 7 because it's got a little tail on it. So the 8 D -- the D is kind of off on the edge. The A 9 sticks out. The A and the R stick out the 10 furthest. But we have a -- part of what I sent 11 you was an overlay of the Ford emblem on top of 12 this. 13 Q. I'm confused about the A. What -- 14 do you mean the O? 15 A. Yeah. I'm sorry. The O, it's got 16 a tail on it like an A. I apologize. 17 Q. All right. 18 A. I'm an engineer -- I'm an engineer 19 looking at a letter backwards. But the way 20 they wrote it, it looks like a cursive A. 21 Excuse me. 22 Q. Right. 23 A. Fixing it...</p>
<p style="text-align: right;">Page 183</p> <p>1 2:15 p.m. We're off the video record. 2 (A break was taken.) 3 THE VIDEOGRAPHER: The time is 4 2:18 p.m. We're back on the video record. 5 Q. (Mr. Hill) All right. I have up 6 on the screen here the photograph that's on 7 page 9404 of your rebuttal report. And it is a 8 photograph of the test Escape after the test. 9 Correct? 10 A. Yes, sir. 11 Q. And can you see on this photo, can 12 you point out where the imprint of the D is 13 from the Ford logo? 14 A. I don't know that I -- it would be 15 on the left side if it was there. I'm not a 16 hundred percent sure it's there. 17 Q. So in analyzing this logo, you 18 didn't look for or notice the imprints of the 19 letters from the word Ford on -- on the Escape? 20 A. Well, no. There are some. But I 21 don't know that the D showed up looking at it 22 on that particular slide. Let me see. 23 Q. Did you, in reviewing any of the</p>	<p style="text-align: right;">Page 185</p> <p>1 Q. Did you use the cursive A (sic) to 2 overlay the logo on the crash test Escape? 3 MS. CANNELLA: Objection. Can we 4 be -- can we not use the cursive A since there 5 is no cursive A? Are we talking about the O or 6 the D? What are we talking about? 7 MR. HILL: I'm talking about the 8 O, the R, the D, any of the letters. 9 MS. CANNELLA: Yeah. 10 A. It's in the -- in the PowerPoint 11 we sent, there's an overlay on top of it that 12 we sent. But if you'll go back to that image, 13 it was just -- you're doing -- the image we had 14 up, the left edge is very visible. And so we 15 used the left edge of the emblem over there 16 because you can see where it comes to a point 17 at the edge of the oval. And so we were able 18 to measure to that point between the crash test 19 vehicle and the accident vehicle because the 20 letters are a little smeared and somebody might 21 have a different interpretation as to what 22 letter is what letter. But yes, I have 23 overlaid them, and I have looked at them. And</p>

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<p style="text-align: right;">Page 186</p> <p>1 it's in my PowerPoint. 2 Q. Let me see here. I've found what 3 I think you were talking about. 4 A. All right. 5 Q. This is from your PowerPoint, 6 which we'll -- I'll go back up. We'll mark 7 this as Exhibit 3. This is the PowerPoint you 8 were referencing with the crash test offset? 9 (Defendant's Exhibit Number 3 10 is marked for identification.) 11 A. Yes. 12 Q. All right. And so if you could go 13 down here, here are photographs of the back of 14 the subject Escape and the crash test Escape. 15 And I think what you're saying here is that in 16 analyzing the position of the crash test Escape 17 logo imprint that you used what you perceive as 18 the edge of the logo, you didn't reference any 19 imprints on the letters in the word Ford? 20 A. Right. But we did provide visual 21 aid so people could understand it. 22 Q. Right. And I'm going to go down 23 to that.</p>	<p style="text-align: right;">Page 188</p> <p>1 part of the O with your hand right now. 2 Q. Okay. 3 MR. HILL: Do y'all know how to 4 write on this? 5 A. Yeah. But it won't come off my 6 computer screen. I'm sorry. That was a joke. 7 I'm sorry. Jokes don't come off. I don't know 8 how to write on that. 9 MR. HILL: Tedra, do you know how 10 to mark on this? I guess not. 11 Q. All right. But anyways -- 12 A. Hey, if you go down in the 13 slide -- 14 Q. Right. 15 A. -- a few slides, it will -- it 16 will show an overlay, I believe. It's above 17 that. 18 Q. All right. Well, let's look at 19 this picture here. This is on page 9459. And 20 this shows you indicating that your belief that 21 the Ford logo edge is over here at the far left 22 of the pink line above the edge of the S in 23 Escape?</p>
<p style="text-align: right;">Page 187</p> <p>1 A. Okay. 2 Q. But is it your testimony that in 3 this photo right here, that you're not able to 4 see the image of any of the letters in the word 5 Ford? 6 A. No. You can see the O and the R. 7 You know, we know where the D is, but I can't 8 say we can see the D. But the O is the best 9 one. 10 Q. Can you in some way -- if I give 11 you the screen, can you point to where you can 12 see the O on this image that I have up on the 13 screen? 14 A. Yes. I can tell you where it is. 15 Q. All right. 16 A. If you see the Escape emblem at 17 the bottom -- 18 Q. Uh-huh. 19 A. -- the Escape XLT, from the right 20 side of the Escape emblem, come straight up and 21 you run into -- keep coming up a little bit 22 higher, a little higher and go left some. 23 Right there. You're -- you're covering the</p>	<p style="text-align: right;">Page 189</p> <p>1 A. Correct. 2 Q. And that's the reference point you 3 used to determine where the logo impacted the 4 crash Escape? 5 A. For this particular method, yes. 6 Q. Right. And so your reference 7 point is not from any of the letters; it's from 8 what you believe to be the edge? 9 A. Yes. 10 Q. Okay. And there's what you're 11 talking about as your overlay? 12 A. Right. 13 Q. Right? 14 A. It needs -- it needs to be tweaked 15 a little bit. But it's just for visual 16 explanation, yes. 17 Q. Right. And again, you're not 18 matching up the letters here. You're matching 19 up the logo with what you believe to be the 20 mark from the far left edge? 21 A. Right. 22 Q. Right. And at no time did you use 23 the imprints of the word Ford as your reference</p>

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<p style="text-align: right;">Page 190</p> <p>1 point?</p> <p>2 A. No. We always use the center of</p> <p>3 the logo or the edge of the logo.</p> <p>4 Q. Right. But you couldn't</p> <p>5 compare -- you don't know where the center of</p> <p>6 the logo is in this instance. Correct?</p> <p>7 A. Well, in this one, no. But in</p> <p>8 others, we do. But yeah, in this one, no. So</p> <p>9 that's why we use the edge because we know</p> <p>10 where the edge is of that logo. And of the</p> <p>11 Escape logo, we know where the center is.</p> <p>12 Q. Right. And so when you say in</p> <p>13 this one, you mean in this case. Like you</p> <p>14 don't -- you didn't use the center of the logo</p> <p>15 at all in this case. You just used what you</p> <p>16 believe to be the left edge?</p> <p>17 A. In Grimes's work that he provided</p> <p>18 in his file, you can see the center of the</p> <p>19 logo. We use the center of the logo versus the</p> <p>20 center of the logo on his. But when we were</p> <p>21 using the stamp marks, we went to the edge of</p> <p>22 the stamp because that's what we thought was</p> <p>23 the most reliable for comparison purposes.</p>	<p style="text-align: right;">Page 192</p> <p>1 the overlay we showed you a minute ago just to</p> <p>2 give perspective. No, sir.</p> <p>3 Q. All right. But the overlay was</p> <p>4 based on your belief of the location of the</p> <p>5 edge, not the location of any of the letters.</p> <p>6 Right?</p> <p>7 A. Well, you -- you keep using the</p> <p>8 edge. And I heard that a long time ago, and I</p> <p>9 thought what does he really mean by edge.</p> <p>10 There's some marks on the outside of the logo</p> <p>11 that are in an oval.</p> <p>12 Q. Right.</p> <p>13 A. We're using that mark there as if</p> <p>14 it's the edge. If it's really not on the edge,</p> <p>15 then the measurement gets a little bit bigger</p> <p>16 than what we get. So we're trying to do</p> <p>17 something that's conservative. And we're</p> <p>18 trying to do something that's repeatable and</p> <p>19 something that's not up to interpretation as to</p> <p>20 what letter you're looking at.</p> <p>21 We think that that green arc up there can</p> <p>22 only be the edge or something inboard of the</p> <p>23 edge of the logo. So that's what we used</p>
<p style="text-align: right;">Page 191</p> <p>1 Q. Well, the difference from the end</p> <p>2 of the D in the word Ford and the edge of the</p> <p>3 logo is a known distance. Right? I mean,</p> <p>4 that's something that can be measured. Do you</p> <p>5 agree with that?</p> <p>6 A. Not in this photo because you</p> <p>7 can't -- don't really know where the D is.</p> <p>8 Q. All right. So but I'm saying in</p> <p>9 general, you could measure -- we know the</p> <p>10 distance between a point on the D and the edge</p> <p>11 of the logo. That could be measured?</p> <p>12 A. If you're just asking can somebody</p> <p>13 take a logo and measure the distances on the</p> <p>14 logo itself, absolutely. A hundred percent.</p> <p>15 Q. Right. Right. And so you didn't</p> <p>16 attempt to measure what you believed to be the</p> <p>17 edge of the logo in connection with any of the</p> <p>18 imprints of the letter Ford. Did you -- did</p> <p>19 you undertake an effort to verify whether this</p> <p>20 edge is the proper distance from any of the</p> <p>21 letter imprints that you may or may not be able</p> <p>22 to see on the Escape?</p> <p>23 A. Nothing -- no. Nothing more than</p>	<p style="text-align: right;">Page 193</p> <p>1 because we think it's reproducible, repeatable,</p> <p>2 and really doesn't -- you know, isn't subject</p> <p>3 to interpretation. If someone wants to use the</p> <p>4 letters, that's fine. We didn't use the</p> <p>5 letters though.</p> <p>6 Q. And that's all I'm trying to</p> <p>7 establish is that all of your measurements are</p> <p>8 dependent upon this green arc here being the</p> <p>9 edge or slightly inside the edge of the logo?</p> <p>10 A. Thank you. Yes, sir.</p> <p>11 Q. Okay. And the same I guess --</p> <p>12 here's a picture of the accident Escape. And</p> <p>13 you have red markings here. This is 9454.</p> <p>14 Explain -- you've got what appears to be a</p> <p>15 similar mark on what would be the edge of the</p> <p>16 logo. But then you also have some marks that</p> <p>17 it looks like would be the letters of the logo.</p> <p>18 Is that right? Or what do the lines represent</p> <p>19 on this page?</p> <p>20 A. Well, I think that the F and the O</p> <p>21 are visible, the swoop to the F and then the</p> <p>22 bottom of the O. So the -- we just did it</p> <p>23 different ways. Here we added those. I think</p>

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<p style="text-align: right;">Page 194</p> <p>1 there's an overlay of that logo somewhere else 2 in this same PowerPoint. But there we are 3 marking some letters. But we're still not 4 using those letters other than for our 5 understanding. 6 Q. Okay. So even in this instance, 7 you didn't use the letters to perform the 8 overlay. You used the markings of what you 9 perceive are the edge of the logo? 10 A. Right. You've actually presented 11 my PowerPoint, not in the order we did it. We 12 started with something to help everyone 13 visualize the logo on the blue vehicle, and 14 then we ended with the silver vehicle -- or the 15 gold vehicle, whichever one it is. So yeah, 16 that's all we're doing is we're trying to give 17 context so that people can see that that is a 18 Ford logo stamp mark for that, for those images 19 you're showing. And then later on we show the 20 measurements. 21 Q. Right. All right. I didn't mean 22 to take it out of order. I'm just trying to 23 understand it and make sure I understand the</p>	<p style="text-align: right;">Page 196</p> <p>1 doesn't cause everything to crash. 2 All right. Can you see that this is from 3 your rebuttal report, figure 3A on the screen? 4 A. Yes. 5 Q. Okay. Great. And we're talking 6 about this marking here above the E that you 7 believe is the O in Ford. Is that correct? 8 A. No. I was talking about the one 9 just above that. 10 Q. Where? 11 A. Right there. Left a little. 12 Right there. 13 Q. Right there (indicating)? 14 A. That is an O in Ford, yes. 15 Q. Okay. And if someone were to have 16 the opinion that that is the curve in the D -- 17 you can see the shape of the D right here -- 18 A. Right. 19 Q. -- not the O, that would change 20 the location of the overlay of the logo. 21 Correct? 22 A. If someone has a different opinion 23 of a different impact point, it would change</p>
<p style="text-align: right;">Page 195</p> <p>1 reference point. And in both cases the 2 reference point is, based on this overlay, what 3 is perceived as the edge or just inside the 4 edge of the logo? 5 A. Yes. For those measurements. 6 Q. All right. And they're not 7 dependent upon the imprint of the letters? 8 A. Correct. For that -- for those 9 measurements. 10 Q. Okay. All right. My screen froze 11 again. 12 MR. HILL: Can y'all -- I hate to 13 do this, but can y'all give me like a 14 five-minute break so I can -- if I can get this 15 fixed, then I won't hold it up, and it will go 16 much faster. 17 THE VIDEOGRAPHER: The time is 18 2:33 p.m. We're off the video record. 19 (A break was taken.) 20 THE VIDEOGRAPHER: The time is 21 2:56 p.m. We are back on video record. 22 Q. (Mr. Hill) All right. I'm going 23 to begin to share my screen. And I hope it</p>	<p style="text-align: right;">Page 197</p> <p>1 the overlay, yes. But there's a lot of reasons 2 why that's not true. 3 Q. All right. And what are the 4 reasons that that is not the D and has to be 5 the O? 6 A. Well, you see the -- to the left 7 over there you have the edge that we've already 8 talked about. But in the lower right, you can 9 see the tow hook, which is the first thing to 10 hit. And it's under -- it's -- it's -- we -- 11 we deal with that in a minute in the PowerPoint 12 where the tow hook has also been shifted left 13 considerably. So I mean, that -- that's why 14 you don't use the letters because there can be 15 different interpretations with the curves. 16 They're all curves. But it wouldn't fit with 17 the rest of the damage on the vehicle if that 18 were true. So you can have the opinion. It 19 will change it if you move it, but it won't 20 change my opinion because I think there's too 21 many other factors. 22 Q. Have you determined or measured 23 the distance from the edge here that you say,</p>

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<p style="text-align: right;">Page 198</p> <p>1 the edge of the logo, to where you say the tow 2 hook is to verify whether that's the proper 3 distance between the tow hook and the edge of 4 the logo? 5 A. Yeah. I did look at that, yes. 6 Not so much in distance, but Grimes did this -- 7 Grimes lined up the tow hook in that hole there 8 and he got the Escape logo to hit where I'm 9 saying it hit and not where you said it just 10 hit. That's in -- that's in his file. I don't 11 know if he knows it's in his file, but it's in 12 his file. I looked at his work that's in his 13 file that -- that shows where it matched. 14 Q. What specifically in his file 15 matches the overlay of the logo from the Ford 16 with where you say the left edge of the logo 17 hit? What specifically in his file matches 18 that? 19 A. He's got a scan of the two 20 vehicles that he -- it looks like he colorized 21 and -- and made 3D models of a mesh, and 22 then -- we'll just call it a scan, a 3D point 23 cloud of the two vehicles fit together at</p>	<p style="text-align: right;">Page 200</p> <p>1 and we'll get to that in a second -- 9406 2 figure 5B, the left side photograph is the 3 crash test Escape after the test obviously. 4 Correct? 5 A. Yes. 6 Q. And did you notice that the Ford 7 emblem on the Escape is not lined up with the 8 center line tape on the roof of the vehicle? 9 A. Well, that's the beauty of it is 10 the -- before the vehicle crushed to where it 11 is now, the two logos already hit. In other 12 words, the logos are hitting very quickly and 13 they're comparative. From the two crashes 14 whatever -- you know, they -- they hit and the 15 logos left their stamp marks. So if the test 16 is actually representative of the accident, 17 then of course the -- the logo should be in the 18 same place except for vertically. But they're 19 not. They're off vertically, you know, and 20 laterally. 21 Q. Well, the -- the actual crash you 22 have a different endpoint -- impact point 23 vertically on the Escape. So I don't</p>
<p style="text-align: right;">Page 199</p> <p>1 maximum engagement. And they're -- they're fit 2 together at maximum engagement with 16 inches 3 between the Ford logo on the Escape and the 4 Ford logo on the front of the truck. That's it 5 the only place he actually shows those logos 6 and things. And they match exactly what I'm 7 showing you here with our work. Remember we 8 had four to six inches with -- with a probable 9 five. He just gives it, you know, five exactly 10 in his work. And I have a PowerPoint of that 11 in this folder. 12 Q. All right. Is that part of this 13 report or is that separate? 14 A. It's not part of the report 15 just -- because it's just -- it's just using 16 his work. Before we could use his work, we -- 17 we did all of our work independently from the 18 raw data that happens to match his data. So 19 it's the five inches that I gave as my opinion 20 as -- as a composite of his file and my file, 21 and -- and the models that we built from his 22 file. 23 Q. All right. Looking now at page --</p>	<p style="text-align: right;">Page 201</p> <p>1 understand your -- your point. You're -- 2 you're going to have a different crush pattern 3 between the subject accident and the crash test 4 regardless because they're impacting at 5 different points on the back of the Escape. 6 A. Well, that's the point. You can 7 see the change of height, you know, which we 8 all know is supposed to be there. But there 9 should be alignment -- the logo should be in 10 the same place, and it's -- it's way off. I 11 mean, because this is one of the earliest 12 things that contacted. And this truck is, you 13 know, how many thousand pounds. You can't get 14 this truck to move over in that amount of time. 15 You're talking almost -- we're talking about 75 16 feet per second. You're talking about moving a 17 foot. You're talking about a 75th of a second 18 until this thing hits. You know, as an 19 approximation, you know, that's -- that's 20 before -- I mean, that's -- that's a very small 21 amount of time to do that, 75, 1 over X, that's 22 a hundredth of a second approximately if you 23 round it. And we're -- so we're usually</p>

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<p style="text-align: right;">Page 202</p> <p>1 looking at crashes that are a 150 milliseconds 2 or 1.5 hundredths. So that's a big difference. 3 If -- one is called a bullet and one is 4 called a target. The bullet vehicle is -- is 5 going to crush in and align on a path that the 6 front logo is not. It's going to be very 7 representative when it hits. And -- and both 8 experts said they used a crush pattern to 9 determine the impact pattern. And -- and 10 grimes got 10.9 and I got 11. So we're off by 11 a tenth of an inch. But the -- the logo is 12 going to be part of that match that he's using. 13 In other words, he can't -- he can't somehow 14 say -- none of us can say that, oh, you know, 15 these -- we're going to use these parts at 16 maximum engagement to determine first contact, 17 but we're not going to use these parts. We're 18 going to say these parts didn't follow the same 19 physics. I didn't expect this argument. But 20 the bottom line is, that logo imprint, there's 21 only one in both of them -- or one very 22 specific spot. It has to represent impact 23 because that logo is going to hit before your</p>	<p style="text-align: right;">Page 204</p> <p>1 test after the test is not aligned with the 2 center line of the roof of the Escape, that 3 that is somehow evidence that the vehicle 4 offset was -- was improper? 5 A. No, I'm not -- forgive me. I was 6 accepting your premise as true in trying to 7 answer the questions. Just because you're 8 looking at a photo that's taken here, it 9 doesn't mean that those things aren't lined up. 10 They're not in plane with each other, so the 11 perspective of the photo may be what's causing 12 it. That was a mistake on my part. We 13 haven't -- we haven't established that logo -- 14 that that logo isn't lined up with the accident 15 of the vehicle. It just looks that way because 16 it just might be the perspective of the photo. 17 Q. Okay. Well, that's what I was 18 trying to get. That's not the basis of your 19 offset argument -- 20 A. No. 21 Q. -- your offset argument is limited 22 to the location of the left edge of the logo 23 imprint on the Escape and then the tow hook</p>
<p style="text-align: right;">Page 203</p> <p>1 crush happens to any great extent. 2 Q. Right. And I -- I wasn't talking 3 about the striking bullet vehicle's logo. I 4 was talking about the logo on the Escape. 5 A. Right. But they're relative to 6 each other. The relative position -- we don't 7 mind it moving eventually. I mean, look at 8 where the bumper on the truck -- on the car is. 9 We're using -- in fact, Grimes said he used the 10 tow hook location mark to put the vehicles 11 together at -- at impact. Well, that tow hook 12 mark is, you know, three feet forward of where 13 the bumper started, but he's still using that 14 as his mark. That's the way it's done because 15 physics dictates that the crush will be along 16 the line of force. And then we can look at 17 where the contact is and then un-crush the 18 vehicles and use that contact. 19 Q. Right. But this is what I was 20 trying to get at. 21 A. Sure. 22 Q. Are you -- are you saying that 23 because the logo on the Escape in the crash</p>	<p style="text-align: right;">Page 205</p> <p>1 impact that you interpret? 2 A. Yes. They both -- those are 3 the -- those are the two strongest indicators 4 is the tow hook impact and the logo impact, 5 they're the simplest to see and understand, 6 although there is other crush profiles and 7 things that could be used, those are the ones 8 that are, you know, rock solid if you choose to 9 use them, and those are the ones that I used. 10 Q. Gotcha. And then you add the 11 overhead photograph as your third method. And 12 I just want to make sure I understand all of 13 the methods that you used to calculate the 14 offset in the crash test. 15 A. Yeah. 16 Q. Would those be the main three? 17 The location of the tow hook impact, the left 18 edge of the logo imprint, and then the overhead 19 video. Does that cover the gamut of what 20 you're relying upon to establish the offsetting 21 in the crash test? 22 A. Logo, tow hook, overhead, yes. 23 Q. Okay. That's -- that's all I'm</p>

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<p style="text-align: right;">Page 206</p> <p>1 getting at with this. All right. This is 2 figure 6 on page 9407. And this is in 3 reference to what I believe you described as 4 your third method on page 9406 at the top-down 5 crash test video and frames. 6 A. Yes. 7 Q. Right. And then you are using 8 this still photograph from the crash test video 9 to analyze the offset based upon this topdown 10 view? 11 A. Yes. 12 Q. All right. And kind of explain 13 for me, if you can, what the different lines 14 that you've added to this still represent. 15 There's green lines and there's a red dash. 16 What do those represent? 17 A. The green line is a projection of 18 a center line of the roof of the F-250. The 19 red line is a projection of the hood of the 20 F-250 so that we get a range of offset between 21 the center line of the Escape, which we can use 22 one line that goes through the hood and the 23 roof of the Escape. So those are about 1.42</p>	<p style="text-align: right;">Page 208</p> <p>1 from the photo. So we're disadvantaged. It 2 could have been. It didn't even get the camera 3 directly over the rail according to him. But 4 you know, within reason -- within range, we -- 5 based on the other work, this is consistent 6 with the other work. And we believe it's -- 7 it's clearly demonstrates, you know, that the 8 offset is approximately five inches plus or 9 minus as the report says. 10 Q. Do you know the height off the 11 ground of the roof of the F-250? 12 A. It's in the specs, yes. I don't 13 know off the top of my head. But it's a little 14 over six feet probably. 15 Q. All right. And do you know the 16 height of the hood of the F-250? 17 A. It's in the specs. I don't know 18 it exactly, no, sir. 19 Q. All right. And do you know the 20 height of -- you see on this photograph there's 21 a hinge right here and right (indicating) here 22 for the rear window of the Escape? Do you see 23 those hinges?</p>
<p style="text-align: right;">Page 207</p> <p>1 from the center of the Escape over and 1.25 to 2 get a range. So that's going to be plus or 3 minus 16 inches, something like that. 4 Q. And that's 1.42 feet? 5 A. Yes. 6 Q. And 1.25 feet? 7 A. Yes. 8 Q. And how did you conduct those 9 measurements between the lines? 10 A. Well, the 5.92 is the width of the 11 Escape. So we can calibrate the image 12 approximately and make measurements on it by 13 knowing a known width. And then we can try to 14 measure other objects in the -- in the image. 15 Q. So that 1.42 and 1.25 depend upon 16 your reference of the overall width of the 17 Escape? 18 A. Partially, yes. Yes. 19 Q. All right. And does this account 20 in any way for the parallax in this photograph? 21 A. That's why we're giving it a 22 range. Clearly, you know, according to Crosby 23 the test was not set up to allow measurements</p>	<p style="text-align: right;">Page 209</p> <p>1 A. I don't know as I sit here, no. 2 Q. You don't know if there's hinges 3 on the Escape? 4 A. I don't know the height of it, but 5 I do see the hinges. 6 Q. Right. And so you don't know the 7 height of the hinges? 8 A. Not as I sit here, no. 9 Q. Okay. And you didn't factor in 10 any of those heights in analyzing the photo 11 parallax here with this -- 12 A. Of course I did. I used -- I used 13 something that was higher than the roof of the 14 Escape and something that was lower than the 15 roof of the Escape to get a range. We know 16 that the roof of the Escape is above the hood 17 of the F-250. But the roof of the Escape is 18 below the roof of the F-250. 19 Q. Right. So the impact -- the 20 center line impact then following that logic 21 would be somewhere between the red dotted line 22 and the green dotted line? 23 A. Yes.</p>

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<p style="text-align: right;">Page 210</p> <p>1 Q. Okay. And you see that the 2 hinge -- 3 A. Yeah. But you're not -- no. 4 You're -- for a measurement, that's what we're 5 using. You know, the -- the impact -- you may 6 be bringing in other things in that. But for 7 scaling, that's what we're doing. We need 8 something higher and lower. I'm not talking 9 about anything but the center lines of the 10 vehicles there because whatever problems there 11 are with these cameras, I know I can track the 12 center lines because he's got tape on it. The 13 rest of the things are different elevations. 14 Q. Right. Well, I'm just talking 15 about in reference to the center line. 16 A. Okay. That's what I'm talking 17 about. 18 Q. Right. You've got a green center 19 line that's higher than the Escape. You've got 20 a red center line that's lower. And so the 21 center line impact would be, according to your 22 analysis, somewhere between the red line and 23 the green one?</p>	<p style="text-align: right;">Page 212</p> <p>1 in the other direction. But can you see the 2 hinge clearly in this, the actual crash video? 3 A. I can. 4 Q. Okay. And you would agree that 5 the center line on the hood is to the front -- 6 the inside edge of that hinge? 7 A. Yes. 8 Q. And then if you extrapolated the 9 hood, it's naturally due to photo parallax, 10 going to be lower because it's higher than the 11 Escape, and so it's going to impact somewhere 12 around the other edge of the hinge? 13 A. Close. 14 Q. Close. Right. So this is what I 15 was -- the point I was trying to make before is 16 that according to this analysis, using the 17 overhead, the center of the F-250 would be 18 somewhere between the right edge of that hinge 19 or the top edge and then somewhere along the 20 hinge. Correct? 21 A. Well, you're -- you're adding a 22 point that we -- the problem is you can -- you 23 can find a large number of points and do a</p>
<p style="text-align: right;">Page 211</p> <p>1 A. For the -- for the purposes of the 2 analysis, yes. 3 Q. Right. And do you see the hinge 4 there is between the red line and the green 5 line? 6 A. Well, I -- I can't see it. But -- 7 Q. All right. Well, hold on a 8 second. Would it help if I pulled up the 9 actual video from the crash test, if I can do 10 that? 11 MS. CANNELLA: How is he suppose 12 to know if that helps or not? I object to the 13 question. 14 MR. HILL: I'm just saying -- 15 Q. Okay. Can you see on the screen 16 now the video from the crash test? 17 A. Sure. 18 Q. All right. And so this is right 19 before impact. And if I take it to the point 20 of impact, all right, we now have, as you can 21 see, the center lines for the hood and the 22 roof. This is basically the same picture you 23 had except I don't know why yours was flipped</p>	<p style="text-align: right;">Page 213</p> <p>1 large number of analyses, and the cameras 2 weren't set up well to do that. We're using 3 this as best we can. And I'm not saying it's 4 relative to the hinge. I'm saying based on the 5 way we scale, the way we did it, you're looking 6 at the measurements I gave you. 7 What is true is the impact was -- was under 8 that hinge. The logo was under that hinge at 9 impact, and we know that. And so generally 10 speaking your analysis is good. But I'm -- you 11 know, I'm not saying it's to the level I think 12 you're trying to point out there. But I do 13 agree that the -- that the logo was below the 14 hinge at impact. 15 Q. Right. Do you know if distance 16 from the inside of this hinge to the center of 17 the Escape? Have you measured that? 18 A. I haven't. But it's going to be 19 close to 18 inches. 20 Q. Okay. And that's from the edge of 21 the hinge -- on this photograph, it would be 22 the -- let's use it from the perspective of the 23 F-250. So you're looking at it from the back.</p>

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<p>1 It would be the right edge of the left hinge.</p> <p>2 You're saying the distance from that -- sorry?</p> <p>3 A. My report gives a spacing between</p> <p>4 the hinges. And we can just take -- take half</p> <p>5 of that. It's -- it's in the original FR26</p> <p>6 report.</p> <p>7 Q. Okay. And in order for your</p> <p>8 analysis of the F-250 logo imprint to be</p> <p>9 correct, you're saying the distance between the</p> <p>10 hinge and the center of the Escape is 18</p> <p>11 inches?</p> <p>12 A. No. I was giving an estimate.</p> <p>13 Let's -- let's open up a -- open up a -- we're</p> <p>14 doing an analysis based on the center lines we</p> <p>15 were provided. The hinge itself is where the</p> <p>16 hinge itself. I'm not trying to measure the</p> <p>17 hinge. I'm doing an offset between the dotted</p> <p>18 center lines that he gave us. Okay? And it's</p> <p>19 just a technique that we can use. It gives a</p> <p>20 range. The hinges are however far the hinges</p> <p>21 are. I'm not trying to estimate that. But</p> <p>22 wherever they are, they are. And I know the</p> <p>23 measurement because I've got it in my first</p>	<p>1 direction or because someone didn't ask him to</p> <p>2 allow measurements to be made. I don't know</p> <p>3 which one. You can read his depo and see which</p> <p>4 one.</p> <p>5 But what we're doing here is one -- I</p> <p>6 wouldn't even know where the center lines of</p> <p>7 the vehicles are if he didn't put the tape on,</p> <p>8 I'd have to be estimating that. But he did --</p> <p>9 Grimes didn't know the tape was on the center</p> <p>10 line. Okay? In his deposition, he didn't know</p> <p>11 it. Crosby confirms it's on the center line.</p> <p>12 Thank you, Mr. Crosby. I appreciate having</p> <p>13 something I can measure to. And so we are</p> <p>14 using those center lines because it's what was</p> <p>15 provided. You are now trying to do an analysis</p> <p>16 based on hinge, which I have no problem doing.</p> <p>17 The impact was under the hinge. The logo was</p> <p>18 under the hinge. But we would do that looking</p> <p>19 at the rear of the vehicle where we wouldn't</p> <p>20 have depth problems and scaling problems.</p> <p>21 The -- the problem is that Crosby didn't do it</p> <p>22 in a way to facilitate this. So we -- we have</p> <p>23 to find reasonably reliable ways. I'm not</p>
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<p>1 report. I just would have to take time to open</p> <p>2 up the report if you want me to do it.</p> <p>3 Q. But are you saying that you can't</p> <p>4 use the hinge as a reference point to determine</p> <p>5 the impact point of the F-250? I mean, it's --</p> <p>6 it's no different than using the center lines.</p> <p>7 It's just another reference point. Correct?</p> <p>8 A. That's false.</p> <p>9 Q. Okay. What's false about that?</p> <p>10 A. Remember, Crosby has routinely</p> <p>11 marked the impact point with markers. He has</p> <p>12 routinely set up cameras to allow measurements</p> <p>13 to be made. He did take photographs of his</p> <p>14 intended impact quite accurately. But he did</p> <p>15 not document the impact. In fact, his report</p> <p>16 is false. When it shows the impact</p> <p>17 orientation, we know it's wrong and that his</p> <p>18 report is misleading. He gave an impact</p> <p>19 location that is one hundred percent not</p> <p>20 represented by his video. And he -- but he</p> <p>21 reported it as an impact location. The only --</p> <p>22 so we have limited tools because he left out</p> <p>23 those tools. Apparently, at someone's</p>	<p>1 going to profess to know where the hinge is</p> <p>2 based off of this photo. I'm going to profess</p> <p>3 to know where the hinge is because I can</p> <p>4 measure the hinge. It's been documented and we</p> <p>5 know where it is. I'm only able to use what --</p> <p>6 because it wasn't properly documented, all</p> <p>7 someone had to do was take a tape measurer and</p> <p>8 hold it up where the logo imprint is and take a</p> <p>9 photo of it. Crosby said he went out there and</p> <p>10 looked at it and held a measure -- the tape up</p> <p>11 to it and says it's offset by an inch, but he</p> <p>12 didn't do it. So now I'm left using these</p> <p>13 methods from my own independent analysis, and I</p> <p>14 get five inches.</p> <p>15 But remember, Grimes did do a point cloud</p> <p>16 match when he got the same answer, and I have</p> <p>17 that to show you. So that's his work that we</p> <p>18 can also use. We don't even have to do this.</p> <p>19 But when we did it to make sure of where it</p> <p>20 was, we got five inches using these methods.</p> <p>21 But I'm not here to measure a hinge this way.</p> <p>22 This is not the right way to do it. We're only</p> <p>23 stuck doing it this way because someone didn't</p>

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<p style="text-align: right;">Page 218</p> <p>1 do it reasonably well in the crash test. 2 Q. Let's go back. Again, I'm 3 simply -- the question was, if you can measure 4 the center line that's referenced in this photo 5 that -- you're saying but you can't reliably 6 refer to the hinge in this photo. What's the 7 basis of that? 8 MS. CANNELLA: Asked and answered. 9 A. I didn't do it to measure the 10 hinges. I -- I used it to measure the distance 11 between the two yellow lines. 12 Q. Right. 13 A. That's why I did it. I don't like 14 the method. I -- I'm stuck with the method 15 because the cameras, you know, as Crosby went 16 through, the camera was -- was improperly 17 positioned. So it's an imperfect method. If I 18 know where something is, I'm going to measure 19 it in the proper way. If I don't know where it 20 is and I have to do this type work and do it 21 multiple ways, that's why we have a range of 22 four to six inches. There's some error 23 involved in this. So I'm -- the hinge, I know</p>	<p style="text-align: right;">Page 220</p> <p>1 I've already told you that his report is 2 erroneous as to where the impact was. His 3 drawings are wrong. We do have one very small 4 fortunate piece of luck, and that is that the 5 tape that someone put on the tow hook to hold 6 the trigger or the light trigger on, that tape 7 did leave a white mark on the rear of the 8 Escape so we can actually use it. Obviously 9 Grimes doesn't know it, and Crosby doesn't know 10 it, but if you look at the photos, you can see 11 it. And then if we go to Grimes's own crush 12 match, we can measure 16 inches, just like I've 13 been telling you all along. There's -- there's 14 45 percent more offset, 16 inches logo to logo 15 that's in his work in his file. But he didn't 16 testify about it in his deposition and, in 17 fact, claimed that he hadn't done it. 18 Q. What is erroneous about Crosby's 19 report? What specifically did he put in there 20 that you say is an error? 21 A. Well, if you look at this image 22 right here -- well, if you back up the video 23 one frame, you'll see that the truck isn't</p>
<p style="text-align: right;">Page 219</p> <p>1 where it is and I can measure it. And we can 2 look at the back of the car and tell the logo 3 mark is under the hinge just like what we see 4 right here. So if we know where the hinge is, 5 we can come down and know where the logo is. 6 But I don't need to estimate where the hinge 7 is. I know where the hinge is. It's the logo 8 mark I need. 9 Q. Right. But the logo mark is 10 dependent upon your conclusion that the left 11 edge of the logo mark is, indeed, a 12 representation of the left edge of the logo. 13 All of your opinions depend upon that being 14 accurate? 15 MS. CANNELLA: Object to the form 16 of the question. Misstates his testimony. 17 A. Well, the logo mark that I see 18 needs to be understood as a logo mark. You're 19 correct. But the tow hook mark needs to be 20 understood as a tow hook. And by the way, 21 Grimes -- excuse me, Crosby said that he didn't 22 put any marking tape or put any marks on there 23 so we could tell where the impact was. And</p>	<p style="text-align: right;">Page 221</p> <p>1 centered over the rail. And he shows it 2 centered over the rail. And then if you look 3 at where -- yeah, and then if you look at where 4 the impact is on the car, the impact is in a 5 different spot. That truck is not centered on 6 that rail. 7 Q. Well, he did not, in his report, 8 indicate anything about the location of the -- 9 the F-250 at the time of impact. Correct? 10 A. Oh, of course he did. He drew it 11 and he stated it was centered over the rail. 12 It says it verbally -- it says it verbally on 13 page two or three or four and shows a diagram 14 on page three or four or five. And it's -- 15 it's wrong. It is -- it is wrong. It is a 16 misstatement of what he did in his crash test. 17 And he knew it, and he left it in there. 18 Q. Well, he stated that the center 19 line was above the center of the truck at the 20 time the test was initiated? 21 A. No. Let's -- let's go back and 22 read it. Let's not argue. Let's just go -- 23 let's go look at the diagram. That's the best</p>

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<p style="text-align: right;">Page 222</p> <p>1 one. He actually has the rail labeled. 2 Q. Right. And all of those diagrams 3 are running the test. Correct? 4 A. He labels it impact. He labels it 5 impact. 6 Q. All right. What else do you claim 7 is erroneous about his report? 8 A. Well, let me -- let me show you 9 that first. I -- I want to show you here. 10 Okay. So it will take a minute. I don't know 11 where his report is. In fact, it's -- in fact, 12 I didn't include the report in what I sent you. 13 Can you pull it up and let's go to page three 14 or four? Just because I didn't want to resend 15 all of Grimes's stuff. You have it in his 16 stuff. 17 Q. You want Grimes's report or 18 Crosby's report. 19 A. Let's go with -- excuse me -- 20 Crosby's. I didn't send it back to you, but in 21 his file something says report and on page five 22 he labels impact configuration and draws the 23 rail down the center of the vehicle, which is</p>	<p style="text-align: right;">Page 224</p> <p>1 that's the third line from the bottom. In this 2 orientation the front of the F-250 struck the 3 rear of the Escape. And above that it 4 describes the orientation with -- it says the 5 F-250 was towed into the impact rolling 6 straight ahead with it's longitudinal center 7 line collinear with the center line of the 8 exponent crash rail. There's only one 9 interpretation of those two sentences. He 10 intended to have it collinear with the crash 11 rail, and it was collinear with the crash rail. 12 It was not. Although, I fully believe that was 13 his intent. 14 Q. Right. But that -- and that's the 15 entire basis of your argument that he has 16 testified that at impact the F-250 was exactly 17 collinear to the center line of the tape. 18 That's the entire basis of that opinion? 19 MS. CANNELLA: Object to the form 20 of the question. 21 Q. What you decided? 22 A. Yes. First, the report is wrong. 23 And then -- and the basis is the work I've</p>
<p style="text-align: right;">Page 223</p> <p>1 false. And then -- 2 Q. Let me see if I can find it. 3 A. Sure. 4 MS. CANNELLA: I believe we're 5 talking about the Exponent report? 6 THE WITNESS: Is that Crosby? 7 MS. CANNELLA: Yeah. He had a 8 letter report too. 9 THE WITNESS: Oh. I'm talking -- 10 MS. CANNELLA: You're talking 11 about the crash test report? 12 THE WITNESS: Yeah. Yep. 13 A. So on page four he states it 14 verbally. On page five he does it with the 15 drawing. The drawing is the proper way to 16 communicate it clearly and he labels it impact. 17 He uses the words and gets the same inclusion, 18 and it's a misstatement of what happened. 19 Q. Okay. Here's page four of his 20 report. 21 A. All right. Last paragraph. And 22 it says in this orientation the front of the 23 F-250 struck the rear of the Escape. And</p>	<p style="text-align: right;">Page 225</p> <p>1 shown you and Grimes's work, which I need to 2 show you, and then the second page of this 3 gives the drawing, if you just flip to it, 4 which is page five, it shows it unequivocally 5 the offset is supposed to be 10.9. The vehicle 6 is supposed to be center line both of which are 7 false and this is labeled impact configuration. 8 And then there's one other page in this report 9 that was wrong. Just on this one topic. 10 Q. All right. Anything else that -- 11 A. Well, we've kind of -- 12 MS. CANNELLA: The basis of what? 13 Object to the form of the question. 14 MR. HILL: The basis of his 15 statement that Crosby's report was wrong. 16 A. Well, we're talking about just 17 with respect to the offset. If you go to 18 page 94 of the report, he reports to a tenth of 19 the inch the impact, which he's off by, you 20 know, five inches which is, you know, erroneous 21 to the reported impact, but it wasn't. 22 Q. And again, that's dependent upon 23 your evaluation of the -- where the logo impact</p>

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<p style="text-align: right;">Page 226</p> <p>1 is on the Escape --</p> <p>2 A. No. That's -- that's Grimes's. I</p> <p>3 didn't need to show you Grimes's. I guess I</p> <p>4 need to show you Grimes's. Grimes's own work</p> <p>5 shows that. He doesn't -- he doesn't discuss</p> <p>6 it in his depo. But let me just show you his</p> <p>7 point cloud that has the vehicles center line</p> <p>8 16 inches apart.</p> <p>9 Q. All right. Did you produce that</p> <p>10 with your files related to the -- your -- what</p> <p>11 did you call it, rebuttal report?</p> <p>12 A. No. No. That's his file. I --</p> <p>13 that is his file.</p> <p>14 Q. All right.</p> <p>15 A. That's his cloud -- all I did is</p> <p>16 view it the way I normally would viewing my own</p> <p>17 work. I sat this morning and worked on cloud</p> <p>18 for other things. I can view it. I can open</p> <p>19 windows. I can close windows. Turn vehicles</p> <p>20 on and turn vehicles off and I can show you how</p> <p>21 -- what we did. I saved the viewing of it to</p> <p>22 present to you today to make it easy. But I</p> <p>23 can open up cloud compare if you want.</p>	<p style="text-align: right;">Page 228</p> <p>1 I've found a point cloud or any work that shows</p> <p>2 the vehicles put together in the point cloud</p> <p>3 with this original document, and then I zoomed</p> <p>4 down on it. And then I look at it from the</p> <p>5 front. So now I can look at the alignment of</p> <p>6 the two vehicles. This is his work. And in</p> <p>7 cloud compare I can -- I can turn the top off.</p> <p>8 So now I turn the top off, and I can see the</p> <p>9 Ford logo. And the first thing you notice is</p> <p>10 the front of this truck is inside the Escape.</p> <p>11 You don't see any hash on the Escape. He has</p> <p>12 the vehicle's position forward so that the</p> <p>13 truck is inside the Escape, which of course</p> <p>14 isn't a good match when that happens, but he</p> <p>15 does have the logo. And then here we kind of</p> <p>16 hold in the front of the Ford so we can see</p> <p>17 where the Escape logo is inside of the Ford.</p> <p>18 And then we just measure the distance between</p> <p>19 the two, and it's 16 inches. So his -- this is</p> <p>20 his original work that was provided with his</p> <p>21 deposition. This is his file.</p> <p>22 Q. Can you leave that up, please.</p> <p>23 A. Sure. I'm -- yeah, there we go.</p>
<p style="text-align: right;">Page 227</p> <p>1 Q. Whatever you want to do to</p> <p>2 illustrate the point. I didn't know if you</p> <p>3 needed me to could open it or if you could open</p> <p>4 it.</p> <p>5 A. Sure. I can open it.</p> <p>6 Q. All right.</p> <p>7 A. Okay. So I'm going to share</p> <p>8 screen. And that's going to work today.</p> <p>9 Share. I'm going to open up a PowerPoint that</p> <p>10 I -- I did so I didn't have to open up cloud</p> <p>11 compare today because it's very hard to open up</p> <p>12 on Zoom. And this is it.</p> <p>13 So it's Grimes's offset. I added those</p> <p>14 words. The rest of this is -- is his title</p> <p>15 from his file, test MMC both vehicles. And the</p> <p>16 first page here is an image of his file that he</p> <p>17 gave me. So it's in the testing folder. Open</p> <p>18 up the testing folder, page two, it's in the</p> <p>19 point clouds. In the point clouds, this is his</p> <p>20 cloud compare file and it's titled test MMC</p> <p>21 both vehicles. And all I do is I open that.</p> <p>22 And when I open it, this is what I see. So</p> <p>23 this is -- this is what he -- the only place</p>	<p style="text-align: right;">Page 229</p> <p>1 That was -- my computer is glitchy today too.</p> <p>2 So that's --</p> <p>3 Q. Go ahead. Sorry.</p> <p>4 A. Let me just finish. That --</p> <p>5 the -- the left is the center of the Ford logo.</p> <p>6 In his cloud compare, the right is the center</p> <p>7 of the Ford logo of the truck in his cloud</p> <p>8 compare and the measurements at the top are</p> <p>9 what's important. The key to the measurements,</p> <p>10 is in the lower right, it gives you the X, Y</p> <p>11 and Z orientations. So the delta-Y is the</p> <p>12 number to look at. It's 16 inches logo to logo</p> <p>13 in the work that he did.</p> <p>14 Q. Okay. And now you just explained</p> <p>15 that this cloud point is not representing the</p> <p>16 vehicles at the point of impact. Correct?</p> <p>17 A. Right. This is his -- this is a</p> <p>18 representation of where they -- where they are.</p> <p>19 And because he said it was a twelve o'clock</p> <p>20 impact, those are 16 inches apart.</p> <p>21 Q. Right. That's not my question.</p> <p>22 Is -- you said like the front of the F-250 in</p> <p>23 this comparison that you're using is already</p>

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<p style="text-align: right;">Page 230</p> <p>1 well past impact. It's not -- this is not 2 representative of the point of impact? 3 A. Oh, it is very representative. 4 But this is his maximum -- this is worse than 5 maximum engagement. He's actually pushed the 6 Ford too far into the Escape. But his 7 alignment -- this is the only place in the file 8 that the impact alignment is documented where 9 it can directly be measured without the effort 10 that we had to put into it. This file is the 11 only one we can measure, it's the only one of 12 proof of where the center of the vehicles are, 13 and he -- he has it at 16 inches, which is the 14 impact orientation. 15 Q. Well, let's -- let's back up now. 16 You said this represents the point of maximum 17 impact from -- from Grimes perspective. 18 Correct? 19 A. Yes. This seems -- this is what 20 he's been using to give his opinions off of, 21 but not -- I don't know why he didn't show it, 22 but it's buried in his file. Yeah. It's -- he 23 still met the length of the vehicles and</p>	<p style="text-align: right;">Page 232</p> <p>1 A. No. Because we have the stamp at 2 near first contact that matches this 3 measurement. So we get the Ford emblem stamp 4 at first contact about 16 inches over that 5 matches this. And then we have his work that 6 shows they're still 16 inches apart, what he's 7 calling maximum engagement. And that's 8 consistent with a straight rear end impact of 9 zero degrees by the -- as -- as the Crosby 10 report says Grimes had him lined up. So we 11 have a record very near first contact. We have 12 a record at maximum contact. And Grimes never 13 showed any of this and -- and -- or revealed 14 this in his deposition, but his file does 15 reveal it. 16 Q. Well, he wasn't asked in his 17 deposition about comparing the Ford logos at 18 maximum crush depth, which is the only thing 19 this shows. And this was produced in his 20 deposition and was part of the basis of his 21 opinion with regard to the maximum depth. So 22 if he didn't feel like the maximum crush depth, 23 which is several feet into the vehicles, was</p>
<p style="text-align: right;">Page 231</p> <p>1 everything, and this is why the length has an 2 issue, but yeah this is much closer to maximum 3 engagement than it is first contact. 4 Q. All right. So this is 5 representing the -- the location of the logos 6 at maximum impact, maximum crush, not at the 7 point of impact between the two vehicles? 8 A. Right. The drawing is near 9 maximum. But because it's a collinear impact 10 it does -- it is -- it is the most represented 11 of the first point of contact that exists 12 that -- that we can do. In other words, 13 he's -- he cannot get a five -- a 10.9 inch 14 offset from this rest or this maximum contact 15 point. These points should still be 11 inches 16 apart because it's a collinear -- excuse me, 17 it's a -- it's a six o'clock PDOF. The truck 18 should push in with five inches -- eleven 19 inches of offset, not 16 inches of offset 20 that's shown here. 21 Q. So your opinion depends upon the 22 crush being perfectly linear with the center 23 line of both vehicles at maximum crush?</p>	<p style="text-align: right;">Page 233</p> <p>1 representative of impact point, then it's not 2 like he's hiding anything; he just didn't think 3 they had anything to do with each other. 4 MS. CANNELLA: Object to whatever 5 that was. Not a question. 6 Q. Do you agree with that? 7 A. As long as we don't have physics 8 and Newton's laws and the other evidence, I 9 could agree with you. But we -- we actually 10 have the problem of science and engineering and 11 the ability to calculate, and even know that 12 this truck didn't move sideways. We have a 13 record of this truck on the video where it's 14 not moving sideways during this. For your 15 statement to be true, we would have to throw 16 out everything else we know about this and we 17 would have to have a video of the truck coming 18 in and dancing, you know, as it comes in. 19 And -- and that didn't happen. And so in a 20 vacuum of uneducated persons, yes. But if 21 we're going to do engineering and science and 22 physics, we -- we know that this is 23 representative of first contact. And so I</p>

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<p style="text-align: right;">Page 234</p> <p>1 disagree with the statement you make 2 wholeheartedly. 3 Q. Well, even in this -- this scan 4 that you have up here, the Ford logo of the 5 Escape is not lined up with the center line of 6 the Escape. Correct? 7 A. Oh, it is. It is. 8 Q. Well, if you look at the bottom of 9 this image, if you would leave it up there, 10 please. 11 A. I'm doing everything I can. The 12 computer doesn't want to cooperate. I 13 apologize. It has -- it has went black and 14 it's freezing. It's why I can't open the 15 original files. Just give it a second and see 16 if it -- let me see if I can stop sharing and 17 if it will come back. With the video image and 18 all this, it's -- I don't know if you can see 19 me. I can't even see you. 20 Q. I can see you. I can't see 21 anything being shared. 22 A. Yeah, I've got a -- I've got a 23 black screen. There we go. Okay. It says the</p>	<p style="text-align: right;">Page 236</p> <p>1 A. I'm -- I'm not -- 2 MS. CANNELLA: Object to the form 3 of the question. Mischaracterizes his 4 testimony. 5 A. I'm saying his logos -- his logos 6 are 16 inches apart, which is the same distance 7 they were apart at impact. 8 Q. Right. 9 A. And we can make measurement of 10 that. We don't have to -- we -- we don't have 11 to try to visualize it. We have an exact 12 measurement of it two different ways. That's 13 what I'm saying. 14 Q. Well, my question is at this point 15 in the crash sequence, what evidence do you 16 have that the Ford Escape logo is still aligned 17 with the center of the Ford Escape? 18 A. Well, it -- well, this is -- it's 19 been pinned and caught by the front of the 20 vehicle. It may not be aligned with the 21 center, but it is definitely -- the 22 relationship between these two is -- is -- has 23 been anchored in the impact. And that's why we</p>
<p style="text-align: right;">Page 235</p> <p>1 picture can't be displayed, so something has 2 happened to the PowerPoint. It's one of those 3 things that happens with computers. Let me try 4 to close it and reopen it. Yeah. We're 5 catching some grief here. Okay. Yeah. 6 This -- okay. That's -- that's where we are. 7 Thank you. 8 Q. Do we need a break for you to try 9 to get it up there? 10 A. Well, I -- I thought it was up 11 there. 12 Q. I can't see it. 13 A. Here, try that. How about that? 14 How about that? 15 Q. Right. Okay. If you'd look at 16 the bottom of the screen, you have a yellow 17 tape there in the scan that indicates the 18 center line on the hood of the Escape. 19 Correct? 20 A. Yes. 21 Q. All right. And you're saying that 22 that is aligned with the Ford logo on the back 23 of the Escape in this scan?</p>	<p style="text-align: right;">Page 237</p> <p>1 have this imprint and we have this -- and them 2 coming in and that's why they're here with the 3 crushed vehicles. That's the reason everything 4 lined up, that's the way Grimes lined it up. 5 It doesn't mean you didn't -- the car was bent. 6 But it's aligned with essentially where it was 7 at the beginning of the impact. But where the 8 front is now, we would have to go look at the 9 video and see what shifting it did. But we 10 don't see the F-250 coming in and going 11 sideways. We don't see the back of the car 12 going sideways to this level. This is -- 13 Grimes said to 10.9 inches, and he got it from 14 this, by the way. This is how he got 10.9. He 15 didn't see the crash happen. He used this type 16 of analysis to get 10.9. And he measured 17 between where they were now and projected back 18 to where they were at the time. And he was 19 able to say 10.9. I'm doing in reverse exactly 20 what he did with this crash test, and this is 21 16. 22 Q. So your opinion depends upon the 23 position of the logo as being anchored</p>

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<p>Page 238</p> <p>1 permanently throughout the crash scene?</p> <p>2 MS. CANNELLA: Object to the form</p> <p>3 of the question. Misstates his testimony.</p> <p>4 A. Look, I change height throughout</p> <p>5 the day. The more I stand up, the shorter I</p> <p>6 get. When I lay down at night, I get a little</p> <p>7 bit longer. But I'm always 6' 2, you know,</p> <p>8 within reason. Yeah. There -- this is -- this</p> <p>9 is a really good -- this is the best</p> <p>10 representation that whatever exists for how the</p> <p>11 vehicles were at maximum engagement and also at</p> <p>12 initial contact, and it's the same method</p> <p>13 Grimes used to get 10.9 inches of offset and I</p> <p>14 used to get 11 inches of offset, and yes. But</p> <p>15 perfect within a millionth of an inch, no. But</p> <p>16 certainly within an inch.</p> <p>17 Q. All right. And how did you</p> <p>18 measure the points here between these two</p> <p>19 edges?</p> <p>20 A. I just opened up his file and</p> <p>21 clicked measure between here and here. And it</p> <p>22 gives me the lateral measurement of 16 inches.</p> <p>23 It's -- it's -- it is literally the</p>	<p>Page 240</p> <p>1 now.</p> <p>2 Q. That -- you have on the screen</p> <p>3 right now -- if you back up -- that is</p> <p>4 contained within Grimes's file, that image</p> <p>5 right there (indicating). Is that correct?</p> <p>6 MS. CANNELLA: All of this data is</p> <p>7 from -- from Grimes's file, Rick. This is --</p> <p>8 he's just -- he's showing us the file that</p> <p>9 Grimes produced. That's what we're looking at.</p> <p>10 MR. HILL: Right.</p> <p>11 Q. But the image that you just had on</p> <p>12 the screen with the pink lines and the</p> <p>13 measurement box, that's not in Grimes's file?</p> <p>14 MS. CANNELLA: You asked him to</p> <p>15 create that for you. You asked him to show it</p> <p>16 to you.</p> <p>17 MR. HILL: Right. But he created</p> <p>18 that prior to the deposition. Correct?</p> <p>19 MS. CANNELLA: No. He did it</p> <p>20 right in front of us. Sorry. Go ahead,</p> <p>21 Bryant.</p> <p>22 A. I -- I did not. I can do it right</p> <p>23 in front of you if I open cloud compare. These</p>
<p>Page 239</p> <p>1 measurements of all of these points that are</p> <p>2 embedded in his file. I just have to ask the</p> <p>3 computer to display it.</p> <p>4 Q. All right. And this measurement</p> <p>5 scan here was not produced to us prior to the</p> <p>6 deposition. Correct?</p> <p>7 A. It was in Grimes's file.</p> <p>8 Q. Well, not your input of the points</p> <p>9 and the measurement between the two points.</p> <p>10 That's not in Grimes's file.</p> <p>11 A. Yes, it is. All of these</p> <p>12 measurements are embedded. That's how it</p> <p>13 generates the images, it knows the measurement</p> <p>14 between each point. I'm just showing -- I'm</p> <p>15 just exposing it. That's all I did.</p> <p>16 Q. Right. But Grimes's scan doesn't</p> <p>17 contain this pink line and the distance window</p> <p>18 up there that you've inputted into this, does</p> <p>19 it?</p> <p>20 MS. CANNELLA: I'm just going to</p> <p>21 object to the suggestion that something --</p> <p>22 something was not produced. That's ridiculous.</p> <p>23 This is Grimes's data we're looking at right</p>	<p>Page 241</p> <p>1 are scaled vehicles all of these measurements</p> <p>2 are embedded in his file. That's how it knows</p> <p>3 where all these things are. That's what we do</p> <p>4 with a scale drawing. When we do a scale</p> <p>5 drawing, we can take a scale and the scale, it</p> <p>6 has an infinite number of measurements on it</p> <p>7 that we just read off. You asked me for the</p> <p>8 distance between these two points, I put the</p> <p>9 scale on it. Now, the computers it's AutoCAD</p> <p>10 so you want the distance between two points, we</p> <p>11 just put it up and measure them. In this 3D</p> <p>12 point cloud, all of these measurements are</p> <p>13 already in there. I'm just going to expose the</p> <p>14 ones I want to see. So I don't have to make</p> <p>15 that pink line. I did that to demonstrate how</p> <p>16 we can use it to show the measurements that are</p> <p>17 in his file already. I'm just exposing them.</p> <p>18 It -- because -- because I have to open the</p> <p>19 cloud compare file, I don't even have the cloud</p> <p>20 compare file on my laptop that I use for Zoom.</p> <p>21 It's on a bigger, stronger computer. All we</p> <p>22 have to do is open his file and say -- and we</p> <p>23 can get any -- we can get millions of</p>

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<p style="text-align: right;">Page 242</p> <p>1 measurements from his file just by telling the 2 computer, show us -- show us these scale 3 measurements it already has in it. We're just 4 exposing it. If it had all the measurements 5 showing, you wouldn't even know what it was 6 because it would just be a cloud of millions of 7 numbers. So this is how builders build houses. 8 This is how re-constructionists draw a scene. 9 This is how re-constructionists look at cars 10 that are stuck together. We use a computer 11 program to open it up. And if I open it up, I 12 can spin it around and look at it and show his 13 work, and I can measure any point that I want 14 to measure and demonstrate it. I'm not really 15 measuring. I'm just exposing the measurement 16 that's in there. So what I did was when I 17 opened the -- the cloud compare, I was going to 18 open it and just show it to you in the depo and 19 then I realized I'm using a non-cloud compare 20 computer and it will also probably kill my 21 video link. I said, okay, let me show them how 22 I would do it if I had the opportunity to show 23 them. It's just -- I'm -- I'm just showing</p>	<p style="text-align: right;">Page 244</p> <p>1 cloud drawings. I'm saying there's no mention 2 in your report that you will be relying upon 3 Grimes's cloud drawings in -- regarding the 4 offset. 5 A. Yeah. I -- I said I used his 6 file. I mean, that's what we used. That's 7 what we used was Crosby's file and Grimes's 8 file and Crosby's depo and Grimes's depo. 9 Q. All right. Well, I think it's 10 pretty clear you said there's three methods 11 that you used to determine the offset -- 12 A. My work. This is his work. 13 Q. If you'll let me finish. But if 14 you're going to rely upon his work -- 15 A. Sir -- sir, I can't see you the 16 way we're doing this. Can I go back to where I 17 can use the camera to see you? 18 Q. Sure. 19 A. That's why I'm interrupting you. 20 Thanks. 21 Q. Can you see me now? 22 A. Nope. Not yet. I'm trying. I 23 can see you now.</p>
<p style="text-align: right;">Page 243</p> <p>1 you -- I'm just zooming up a photo is all I'm 2 doing. 3 Q. Right. Well, let me ask this way. 4 Is there any mention in your rebuttal report of 5 your reliance upon Mr. Grimes's point cloud 6 images that you've just shown me as a basis for 7 your opinion regarding the offset in the crash 8 test? 9 A. No. That was his work. He 10 already provided the measurements. I'm just 11 showing you his measurements to support that my 12 work, you know, is accurate. We didn't -- we 13 knew that the videos and whatnot showed it 14 being off. So we went through the upwards. 15 And Mr. Grimes didn't even understand there was 16 a stamp there. So I thought that would be the 17 easiest way for someone to understand it. 18 You're obviously having trouble understanding 19 this cloud compare file and how it functions. 20 But if I just open up his own file and show you 21 this drawing, I mean, that's all I'm doing 22 here. 23 Q. I -- I totally understand the</p>	<p style="text-align: right;">Page 245</p> <p>1 Q. Okay. All I'm trying to establish 2 is, can you point to where in your rebuttal 3 report you indicate that you intend to rely 4 upon the cloud scans done by Mr. Grimes to give 5 opinions regarding the offset in the crash 6 test? 7 A. I would -- I think it's in the 8 file materials I listed. This is just one of 9 his file materials. He didn't -- remember, the 10 photos we're using, you know, are his photos. 11 I've got hundreds of photos I didn't show you, 12 but I'm using all of those. So this is just 13 part of his file. I think I said file. Let 14 me -- let me -- let me open up -- let me open 15 up my report if I could find it. 16 Q. Sure. 17 A. Man, yeah, it says I have reviewed 18 and analyzed report and deposition of Grimes, 19 report and deposition of Crosby, scan data, 20 which is what we're looking at, and photos and 21 video data from the crash test performed by 22 Grimes and Crosby. And then I -- I go on to 23 say one more time to say Grimes's file</p>

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<p style="text-align: right;">Page 246</p> <p>1 materials. And I say based on the above, and 2 then -- then I used it. And then the other is 3 my own work. But if -- if Grimes had a photo, 4 I would expect that I could use it. 5 Q. Well, I'm saying you specifically 6 delineate in your report that you use three 7 methods -- three methods to determine the crash 8 test offset. 9 A. That's my independent -- 10 Q. Let me finish my question. Was 11 this method of using Grimes's scan data listed 12 as one of the methods that you used to 13 determine the test offset? 14 A. No. Because my methods were 15 independent of this. This is just his data 16 that's in his file that follows the same 17 methodology that he did to reconstruct the 18 accident and that I used to reconstruct the 19 accident. He's presented it for us just like 20 he did all of his other data, just like he 21 presented scanned images of how the accident 22 vehicles hit. I'm just using his presentation 23 to point out what the measurements actually are</p>	<p style="text-align: right;">Page 248</p> <p>1 covered every basis for your -- or all of the 2 information you're relying upon to give 3 opinions regarding the offset in the crash 4 test. We've -- 5 A. I'd like to show a photo then. 6 Q. Sure. 7 A. Share screen. Let me find which 8 photo it is. Come on, computer. It's -- it's 9 refusing to open. 10 MS. CANNELLA: We can see the 11 PowerPoint, Bryant. We just -- probably like 12 you, it's just blank. 13 THE WITNESS: Yes. 14 A. The image on the left, slide 16 in 15 what I've given -- maybe the attorney can open 16 up slide 16 in -- in what we gave you. 17 Q. All right. Let me look. 18 A. I've got to stop sharing and try 19 to get this off my screen. Apparently, when I 20 share it, it locks me up. 21 Q. Yeah. I've been having the same 22 issue. 23 A. You know, the bigger the computer</p>
<p style="text-align: right;">Page 247</p> <p>1 in his work because he didn't know. But it is 2 in there just to be -- just to be measured. So 3 no, I'm -- I'm just -- I was just going over my 4 work. This is his work. 5 Q. Are there any other methods, 6 whether it's based upon your work or 7 Mr. Grimes's work or Mr. Crosby's work, that 8 you're going to rely upon to give testimony 9 regarding the offset in the crash test? 10 A. In the -- in the PowerPoint we 11 show where his tow hook hit the crash test 12 versus where it hit in the accident. That's 13 just using the photos. I put them in here. I 14 don't need the PowerPoint. I can show you the 15 photos. But I did put you some photos in what 16 we did yesterday to show the tow hook. If you 17 want me to use the original photos, I'll use 18 the original photos. And we don't get a 19 measurement out of it, per se, unless we use 20 Grimes's work. Then -- then you can measure 21 it. But you can see the tow hook really well 22 in some of the photos. 23 Q. I just want to make sure I've</p>	<p style="text-align: right;">Page 249</p> <p>1 gets, the -- the files seem to always stay in 2 front of them. 3 Q. So you need slide 16 from -- from 4 which document? 5 A. Intended impact versus actual 6 impact. 7 Q. And this is from your file that 8 you produced in association with this report? 9 A. Yes. 10 Q. The rebuttal report? 11 A. It's in the GBB Post Depo Plus. 12 Q. What did you call that again? 13 A. I have a folder called GBB Post 14 Depo Plus. I assume it's -- yeah. It's -- 15 Q. I don't have such a folder. 16 A. The -- the PowerPoints I've been 17 showing you and my amended report were in that 18 folder. 19 Q. And the title again is what? I'm 20 sorry. 21 A. 10519 -- this says it's Quest Post 22 Depo. 23 MS. CANNELLA: Yeah, that's what</p>

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<p style="text-align: right;">Page 250</p> <p>1 we sent -- that's the -- that's what we sent</p> <p>2 you. That was their name of the file.</p> <p>3 THE WITNESS: Yep. If I said GBB,</p> <p>4 I meant Quest. 10519 Quest Post Depo.</p> <p>5 MS. CANNELLA: And then aside of</p> <p>6 that is, approach angle plus, photomodels plus,</p> <p>7 and then a whole bunch -- not a whole bunch,</p> <p>8 but a number -- a dozen or so or less PDFs.</p> <p>9 Q. I don't see that file. Sorry.</p> <p>10 MS. CANNELLA: What's the name of</p> <p>11 it, Bryant, did you say?</p> <p>12 THE WITNESS: It is 10519 Quest</p> <p>13 Post Depo Plus.</p> <p>14 MS. CANNELLA: Yeah. But what</p> <p>15 inside of that file did you want?</p> <p>16 THE WITNESS: Let me verify.</p> <p>17 Intended versus actual impact.</p> <p>18 MS. CANNELLA: Intended impact</p> <p>19 versus actual impact?</p> <p>20 THE WITNESS: Yes.</p> <p>21 MS. CANNELLA: If you need me to</p> <p>22 get that --</p> <p>23 MR. HILL: No, I have that once</p>	<p style="text-align: right;">Page 252</p> <p>1 slide 17 shows where the tow hook hit in the</p> <p>2 crash test. And there's an orange line dropped</p> <p>3 down from the bolt poles on the tailgate of</p> <p>4 where the license plate is. It's one foot</p> <p>5 across. And we can clearly see that the tow</p> <p>6 hook imprint in the accident is to the right of</p> <p>7 those bolt holes. And in the crash test the</p> <p>8 tow hook imprint is to the left of those bolt</p> <p>9 holes.</p> <p>10 Q. Right. And this is the position</p> <p>11 after both crashes, not at the point of initial</p> <p>12 impact?</p> <p>13 A. Well, no. The one on the right is</p> <p>14 initial impact because that tow hook is -- left</p> <p>15 a dent in the tailgate right there. I mean,</p> <p>16 that's -- the tow hook sticks out the furthest</p> <p>17 in the front of the truck. And on the left,</p> <p>18 that dent in the bumper is from the tow hook.</p> <p>19 And if we go on to zoom up on it, it's got a</p> <p>20 little bit of white paint on it from the tape</p> <p>21 on the front of the tow hook. And that's what</p> <p>22 bent the bumper the way it is. So that's where</p> <p>23 the tow hook hit there as well. So that's --</p>
<p style="text-align: right;">Page 251</p> <p>1 you explained it that way.</p> <p>2 THE WITNESS: Yeah.</p> <p>3 MS. CANNELLA: All right.</p> <p>4 Q. Is that it (indicating)?</p> <p>5 A. Yes, sir. Slide 16.</p> <p>6 Q. Let's go ahead and mark this</p> <p>7 document, intended impact versus actual impact.</p> <p>8 It's Bryson 09487 through 9508 as whatever the</p> <p>9 next exhibit is.</p> <p>10 (Defendant's Exhibit Number 4</p> <p>11 is marked for identification.)</p> <p>12 Q. Okay. That slide appears to be</p> <p>13 elite page 16, although you call it slide 16.</p> <p>14 A. That's it.</p> <p>15 Q. All right.</p> <p>16 A. Okay.</p> <p>17 Q. And what did you want to -- you</p> <p>18 said you wanted to refer to this photo as</p> <p>19 additional support for your offset opinions?</p> <p>20 A. Yes. If you go down one slide --</p> <p>21 Q. Slide 17?</p> <p>22 A. Yeah. 17, the red arrow shows</p> <p>23 where the tow hook hit in the accident. And</p>	<p style="text-align: right;">Page 253</p> <p>1 those represent as good as accident</p> <p>2 re-constructionists can do in an initial impact</p> <p>3 because of the -- the orientation of the impact</p> <p>4 and everything. So yeah, that's -- that's --</p> <p>5 that's where it was pushed to. But it's also</p> <p>6 the piece of metal where it started. And it</p> <p>7 also proves it's not an override because that</p> <p>8 tow hook is stuck on that bumper all the way to</p> <p>9 maximum engagement. If it was an override,</p> <p>10 then that tow hook which is located on the</p> <p>11 bumper of the truck wouldn't still be pushing</p> <p>12 on the bumper of the car.</p> <p>13 Q. And do you have a photograph that</p> <p>14 shows the white tape that you mentioned?</p> <p>15 A. Go to the next slide.</p> <p>16 Q. Yeah. And that's --</p> <p>17 A. And -- sorry.</p> <p>18 Q. Is that correct?</p> <p>19 A. Go down a slide or two in this</p> <p>20 presentation and we'll get up close on it.</p> <p>21 Q. All right.</p> <p>22 A. Keep going. There we go. Okay.</p> <p>23 That slide right there (indicating), we can see</p>

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<p style="text-align: right;">Page 254</p> <p>1 the white on the bumper in the top image. And</p> <p>2 we see the bumper is caved in because the tow</p> <p>3 hook hit it in the crash test. But in the</p> <p>4 bottom half of this slide, that's the bumper</p> <p>5 from the accident vehicle. And it -- you know,</p> <p>6 it's still got its original shape for the most</p> <p>7 part. But you can see the tape marks up in</p> <p>8 that hole a lot better in that photo.</p> <p>9 Q. All right. Where exactly are the</p> <p>10 tape marks on the photo on the top?</p> <p>11 A. If you follow the bumper in, at</p> <p>12 the maximum point of the bumper. So right</p> <p>13 there (indicating). Yep. Right there. Those</p> <p>14 white marks are from the tape. I need to --</p> <p>15 let me see if I can find the image. This is --</p> <p>16 give me just a second. Oh, okay. Go to slide</p> <p>17 13. There we go. There's a close-up of the</p> <p>18 tow hook, a little bit of black on the end on</p> <p>19 top of the white tape. And there's the white</p> <p>20 tape mark up on the bumper of the Escape.</p> <p>21 Q. Gotcha. And that's Bryson 9499.</p> <p>22 A. Oh good.</p> <p>23 Q. All right. Anything else about</p>	<p style="text-align: right;">Page 256</p> <p>1 what all supports that opinion?</p> <p>2 A. Well, physics, accident</p> <p>3 reconstruction experience, and both Grimes and</p> <p>4 Buchner did it exactly the same way. We used</p> <p>5 the tow hooks. He says, he used the tow hooks</p> <p>6 to match them together. That's how he got his</p> <p>7 10.9 and, you know, we got our approximately a</p> <p>8 foot, which is, you know, 11. We're -- we're</p> <p>9 both using the same methodology to match the</p> <p>10 damage profile. That's how it's taught in the</p> <p>11 accident reconstruction books. You -- you</p> <p>12 match up the damage profiles on to the known</p> <p>13 areas. And then you know where those known</p> <p>14 areas were, you know, before they were</p> <p>15 undamaged, and that gives you your</p> <p>16 measurements. It's -- it's -- that's accident</p> <p>17 reconstruction 101. How else could you do it?</p> <p>18 Q. And you used a similar indication</p> <p>19 of the tow hook impact location on the bumper</p> <p>20 cover of the crash test Escape to analyze the</p> <p>21 offset?</p> <p>22 A. We did. In my photos of the seize</p> <p>23 bracket, we located the seize bracket on the</p>
<p style="text-align: right;">Page 255</p> <p>1 this photograph that you're relying upon or</p> <p>2 these photographs or this presentation with</p> <p>3 regard to the offset?</p> <p>4 A. Yes. Go to slide 20. Slide 20 is</p> <p>5 not the -- not the same one I was looking at.</p> <p>6 15 would be it. I'm sorry. 15 is kind of a</p> <p>7 comparison of the one we just looked at to show</p> <p>8 where the frame horn hit in the accident</p> <p>9 compared to where the frame horn hit on slide</p> <p>10 13 that we were just talking about. And I say</p> <p>11 the frame horn. I actually mean the tow hook.</p> <p>12 I apologize.</p> <p>13 Q. So slide 15, which is Bryson 9501,</p> <p>14 you're matching up the tow hook in the accident</p> <p>15 F-250 on where you think the tow hook impacted</p> <p>16 the accident Escape? That's the premise of the</p> <p>17 red area?</p> <p>18 A. Yes, and that gives eleven inches</p> <p>19 of offset.</p> <p>20 Q. And what basis do you have to</p> <p>21 conclude that the point of the red arrow is</p> <p>22 indicative of the point where the tow hook</p> <p>23 impacted the accident Escape? Like what's --</p>	<p style="text-align: right;">Page 257</p> <p>1 bumper. If you go down to -- what was it?</p> <p>2 Slide 21. In my report, in my work, in my</p> <p>3 depo, there's a dent on the -- on the bumper</p> <p>4 there at the bottom that corresponds to the</p> <p>5 four and a half inches wide seize bracket.</p> <p>6 That's working out of memory, four and a half</p> <p>7 inches. But there is a dent on the right</p> <p>8 center of that, that corresponds to that seize</p> <p>9 bracket as well.</p> <p>10 Q. Right. So that shows you that the</p> <p>11 C's bracket impacted the bumper in the actual</p> <p>12 subject accident?</p> <p>13 A. Yep. As an override. So it went</p> <p>14 up and over it and kept going. And the bumper</p> <p>15 went out of the way and that's why it was --</p> <p>16 you know, it was already compromised by that</p> <p>17 point in time.</p> <p>18 Q. Right. But the seize bracket did</p> <p>19 at least impact the bumper in the actual</p> <p>20 accident?</p> <p>21 MS. CANNELLA: Asked and answered.</p> <p>22 A. Yeah. But in the crash test the</p> <p>23 seize bracket did not hit the bumper. Only the</p>

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<p style="text-align: right;">Page 258</p> <p>1 tow hook hit it, and that's why it's not an 2 override. 3 Q. And so my question was did you -- 4 you see here -- and this is slide 20, Bryson 5 9506. And you see here there is the bumper 6 cover hanging down on the bottom right of the 7 crash Escape. Did you reference any tow hook 8 marks on the bumper cover to determine the 9 offset in the crash deck? 10 A. I don't -- I don't have enough to 11 do that with. No, sir. I just have the photos 12 that were provided. I have a better record of 13 it. I have a permanent record in the bumper 14 that I can see, so I'm happy with that. No, I 15 haven't used the bumper cover of the crash 16 test. 17 Q. That was my only question. Okay. 18 A. Sorry. 19 Q. All right. Looking here at the 20 slide we have up, slide 20, it's a rear view of 21 the accident -- I'm sorry, the crash test 22 Escape on the left. And looking at that 23 photograph, can you tell whether the rear seat</p>	<p style="text-align: right;">Page 260</p> <p>1 I -- I haven't seen. 2 Q. Right. All right. 3 MR. HILL: Let's take about 4 another four-minute break. 5 MS. CANNELLA: Before we go off 6 the record -- just before we go off the record, 7 Rick, can you send me that -- that image that 8 you put on the screen with the HVE of the wreck 9 Escape? 10 MR. HILL: Sure. I'm going to 11 have to find it. I'll do it when we go off the 12 record at the end. 13 MS. CANNELLA: Thank you. 14 MR. HILL: All right. 15 THE VIDEOGRAPHER: The time is 16 4:11 p.m. We're now off the record. 17 (A break was taken.) 18 THE VIDEOGRAPHER: The time is 19 4:39 p.m. We're back on the record. 20 MR. HILL: Thanks. 21 Q. (Mr. Hill) Mr. Buchner, what 22 evidence do you have or that you intend to cite 23 to that Mr. Grimes used the distance between</p>
<p style="text-align: right;">Page 259</p> <p>1 was deflected by the hatch on the Escape? 2 A. No. 3 Q. Okay. What would you need to look 4 at in order to determine that? 5 A. We've talked about that already. 6 I thought there was some motion of it. But I 7 wasn't sure if it was the floor pan or the 8 hatch or what. I didn't have -- you know, 9 Grimes didn't measure or scan it. 10 Q. Yeah. 11 A. I don't know. It's irrelevant to 12 me because this crash test is not relevant -- 13 not representative of the accident. But I 14 think -- I said I think it was displaced some, 15 but I don't know why. 16 Q. Yeah. I was just asking what 17 would you need to look at to -- to confirm the 18 source of the displacement in the crash test. 19 Whether you think it's relevant or not, what 20 would you need to do to do that? 21 A. I'd have to start working to see 22 if I could figure it out. But of course I'd 23 need to see the inside of the vehicle, which</p>	<p style="text-align: right;">Page 261</p> <p>1 the logos in his point -- in his cloud scans of 2 the subject accident to determine the offset in 3 the subject accident? 4 A. I'm not saying he did because he 5 didn't even notice the logos according to his 6 depo. I'm just using his work. That was the 7 easiest way I thought I could demonstrate it 8 because it's the easiest way to find the center 9 of the vehicle in his -- in his -- the scan he 10 gave us. But we could probably, you know, use 11 the center line markings or some other things. 12 But the logos are -- just were the simplest to 13 me because I knew where the logos were at first 14 contact -- or represented at first contact. 15 And I also knew that we had used -- he had used 16 things like a tow hook to back it up at the 17 crash. So this is just the same methodology. 18 So no, he's -- he's free to use whatever he 19 wants. He -- he basically -- I don't think 20 he -- he even opined to what the offset was 21 unless he said 10.9 inches in the crash test. 22 Q. Okay. I think -- I think we 23 misfired there. I was asking about the subject</p>

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<p style="text-align: right;">Page 262</p> <p>1 crash.</p> <p>2 A. Oh.</p> <p>3 Q. Not -- not the crash test. So it</p> <p>4 was the subject crash. What evidence do you</p> <p>5 have that Mr. Grimes used the distance between</p> <p>6 the logos at maximum crush to determine the</p> <p>7 offset in the actual crash?</p> <p>8 A. Well, that's -- it was 10.9 inches</p> <p>9 according to him because that is -- would be</p> <p>10 the offset. I don't know if he used that or</p> <p>11 whether he used other things. I don't think he</p> <p>12 had ever seen the logo imprints if he was -- in</p> <p>13 his depo. He was probably using the tow hooks</p> <p>14 or something similar. But you know, they're</p> <p>15 all geometrically tied together. So whether he</p> <p>16 is using it or not, that's the answer. I'm not</p> <p>17 saying he did use it. I'm saying that's --</p> <p>18 that's something I can use to easily show some</p> <p>19 additional work within the accident. I</p> <p>20 don't -- I think he was probably using the tow</p> <p>21 hooks.</p> <p>22 Q. Okay. So if we read your</p> <p>23 deposition transcript from earlier today and it</p>	<p style="text-align: right;">Page 264</p> <p>1 provided, he provided that measurement.</p> <p>2 Q. Right. You keep switching back</p> <p>3 between the crash test and the subject</p> <p>4 accident. I'm not talking about the crash</p> <p>5 test. I'm talking about the subject accident.</p> <p>6 In Mr. Grimes's analysis of the subject</p> <p>7 accident. You testified earlier today that you</p> <p>8 believed his methodology for coming up with</p> <p>9 10.9 in the subject crash was based upon his</p> <p>10 point cloud scans of the subject vehicles and</p> <p>11 the measurement of the distance between the</p> <p>12 logos in those scans. And I'm saying, do you</p> <p>13 have any basis to believe that he used the</p> <p>14 distance between the logos and the point scans</p> <p>15 of the actual vehicles to come up with the</p> <p>16 offset in the actual crash?</p> <p>17 A. In the actual crash, whether he</p> <p>18 clicked on the logos or not, they're in his</p> <p>19 point cloud. Similarly, you can measure</p> <p>20 between them. I'm not saying he used those.</p> <p>21 I'm not even saying he looked at those. He</p> <p>22 might have just been using the -- the tow hooks</p> <p>23 and things that he testified to. But as I sit</p>
<p style="text-align: right;">Page 263</p> <p>1 says that you opined that Mr. Grimes used the</p> <p>2 distance between the logos and his scans of the</p> <p>3 actual subject vehicles to determine the offset</p> <p>4 in the actual crash, that would be a misreading</p> <p>5 or a misinterpretation of your testimony?</p> <p>6 You -- you don't know whether he used that or</p> <p>7 not to come up with the 10.9 number that he</p> <p>8 decided was the offset in the subject crash?</p> <p>9 A. I can look at it both ways. Yes,</p> <p>10 that is a good accurate statement I made. And</p> <p>11 we can also look at it where it is inaccurate.</p> <p>12 The bottom line is the only point cloud match</p> <p>13 that he provided that could be opened and used</p> <p>14 shows 16 inches between the logos. There isn't</p> <p>15 one that shows 10.9 and there's nothing in his</p> <p>16 file that's a point cloud where they match that</p> <p>17 he provided that can show 10.9. Every -- every</p> <p>18 reference that we use would give 16. I just</p> <p>19 use those. And they are his measurements</p> <p>20 because they're part of the point cloud. But</p> <p>21 he didn't reference them. So I agree he didn't</p> <p>22 reference them, and I'm not saying he said he</p> <p>23 referenced them. I'm saying, in what he</p>	<p style="text-align: right;">Page 265</p> <p>1 here, I haven't -- to my knowledge, I haven't</p> <p>2 seen his point cloud match for the accident.</p> <p>3 Q. Okay.</p> <p>4 A. If I can find it though, I could</p> <p>5 do a better job of answering the question.</p> <p>6 Q. Sure. Did you use your scans --</p> <p>7 your point cloud data from the actual crash to</p> <p>8 measure the distance between the logos at</p> <p>9 maximum crush to calculate your offset in the</p> <p>10 subject crash?</p> <p>11 A. No. We -- we didn't calculate the</p> <p>12 offset. We matched the vehicles together to</p> <p>13 demonstrate the offset.</p> <p>14 Q. Right.</p> <p>15 A. And then -- then of course we can</p> <p>16 measure between any references on the vehicle</p> <p>17 we want to get it. When we actually went back</p> <p>18 and did the eleven inches, I don't -- I don't</p> <p>19 remember if we were -- I'm pretty sure we were</p> <p>20 using the logos before that. But we could have</p> <p>21 done it two or three other ways. But -- but</p> <p>22 because you want to check it a few times, a few</p> <p>23 different ways. I don't remember exactly what</p>

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<p style="text-align: right;">Page 266</p> <p>1 the process was. But we got, you know, eleven. 2 I think there's something -- I think there's 3 even something -- I think we are measuring the 4 logos for the eleven. 5 Q. Can you say for certain how you -- 6 first of all, it's my understanding in your 7 original report and your original deposition 8 and in your original simulation you determined 9 the offset was twelve inches. And you indicate 10 that you actually determined the offset in the 11 subject crash to be eleven. 12 A. Okay. It's almost an 13 understanding or a semantics issue. In my 14 deposition I didn't have the offset recorded or 15 written down. I was asked so I took a ruler to 16 our scale drawings and -- and said, hey, it's 17 approximately a foot. You know, it's very hard 18 on those drawings to see an inch at the size 19 they were printed out for. So once I said a 20 foot, I've been true to a foot. But I know 21 that Grimes said 10.9. And I've checked our 22 work since then, and I'm like, okay, if we 23 really push our work and our clouds and</p>	<p style="text-align: right;">Page 268</p> <p>1 A. Right. At -- at the time the 2 simulation was set up, I could have opened it, 3 measured it or Ms. Porter could have done that 4 and then put it in the simulation. In other 5 words, that's the way it would have worked 6 because we have the measurement contained -- 7 not in a contained simulation, but contained in 8 the point clouds. 9 Q. Right. So you -- at the time you 10 ran the original simulation, you went through 11 that process and you decided to input twelve 12 inches as the offset in the original 13 simulation? 14 A. I think we probably put in eleven. 15 But like I said, I don't have that file 16 anymore. Now, since -- since we redid it, I 17 said I want to be true to what I said in the 18 depo. And that errs in the favor of -- of 19 producing more crush. 20 Q. Yep. 21 A. So I gone with the twelve because 22 that's what I said in my depo, but if you -- 23 you want to know what I believe it is in my</p>
<p style="text-align: right;">Page 267</p> <p>1 everything, 11 inches is the right number. 2 So -- so I'm not changing, I'm just able to be 3 more accurate because I went back and did it 4 more precisely with a better tool. 5 To be clear, the offset is determined by the 6 damage match on the vehicles. I don't measure 7 it and then decide how to put the vehicles 8 together. I put the vehicles together. And 9 then if I want it, I open up the file and I 10 measure it. In other words, the -- the 11 physics, the geometry of the vehicles 12 determines it. So it's -- it's an oversight on 13 my part not to have recorded it, written it 14 down or saved that measurement, but it's a 15 product of the -- of the work we do. It's -- 16 and it's contained in the work with all the 17 millions of other measurements that are in 18 there. I just had not formally presented it. 19 And I did the best I could in the depo to give 20 a good answer, which was twelve. 21 Q. Okay. You had to have done that 22 work you just described in order to decide what 23 offset to use in your original simulation.</p>	<p style="text-align: right;">Page 269</p> <p>1 heart, I believe it's 11. But both of them are 2 approximately 11, approximately 12. Either one 3 is fine. 4 Q. Right. But you don't know as we 5 sit here today what offset you used in your 6 original simulation that formed the basis of 7 your -- your -- your report in this case? 8 A. That's right. I would say 0.9 9 plus or minus 0.1 along in there depending on 10 what we measured that day. 11 Q. Okay. Right. And now that you 12 say that you've looked at it closer after your 13 deposition and you think it's closer to eleven, 14 what -- how did you come to that conclusion? 15 What -- what was the methodology you used to 16 come to that conclusion? 17 A. Well, I'll give you -- I've 18 provided you an image of it, of one of them and 19 one that's easy for the jury and everybody to 20 understand. It's in the crash test offset 21 PowerPoint, if you'd like to open it or I'll 22 try to open it. 23 Q. I can do it. Hold on.</p>

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<p style="text-align: right;">Page 270</p> <p>1 A. I -- I produced something that was</p> <p>2 simple.</p> <p>3 Q. Yeah. All right. Can you see</p> <p>4 the -- this is the -- we've marked this as an</p> <p>5 exhibit somewhere along the lines. This is</p> <p>6 crash test offset, that's what you're referring</p> <p>7 to?</p> <p>8 A. Yeah. Slide two.</p> <p>9 Q. All right. Slide two. This slide</p> <p>10 here?</p> <p>11 A. Yes.</p> <p>12 Q. All right. And so this appears to</p> <p>13 be a measurement of a photograph -- or is this</p> <p>14 a scan of the subject, Escape?</p> <p>15 A. This is a -- this is a photomodel</p> <p>16 of the Escape, the accident Escape where we can</p> <p>17 see the logo imprint of the Ford on it, of the</p> <p>18 Ford F-250 on it. So in the -- in the process</p> <p>19 of doing our work for the rebuttal, we had to</p> <p>20 make a photomodel of the Ford with a logo on</p> <p>21 it. We've already talked about that.</p> <p>22 Q. Right.</p> <p>23 A. And so then we made a measurement</p>	<p style="text-align: right;">Page 272</p> <p>1 A. Yes.</p> <p>2 Q. On page two of the crash test</p> <p>3 offset.</p> <p>4 A. Yes.</p> <p>5 Q. How did you determine the midpoint</p> <p>6 of the Ford logo you can see in this</p> <p>7 photograph?</p> <p>8 A. It's visually. It could be a</p> <p>9 little bit to the left of where it is. But if</p> <p>10 I missed it, I wanted to miss it a little bit,</p> <p>11 you know, to the right. So it's -- it's a</p> <p>12 visual determination. Trying to -- the bottom</p> <p>13 of the arc in the left and the center of the</p> <p>14 logo in the right because they are about the</p> <p>15 same level and measure it.</p> <p>16 Q. Okay. So -- so you didn't measure</p> <p>17 the width of the Ford logo here and determine</p> <p>18 the exact midpoint of the logo when you input</p> <p>19 the points for the photomodel to do the</p> <p>20 measure. You just eyeballed it?</p> <p>21 A. Right. I just clicked on the</p> <p>22 center and then clicked on the bottom of the</p> <p>23 arc on the left. If somebody wants to do it</p>
<p style="text-align: right;">Page 271</p> <p>1 on here, and we got a little less than eleven</p> <p>2 inches.</p> <p>3 Q. All right. And is this the --</p> <p>4 it's not a photograph that you put in the</p> <p>5 photomodel. It's a -- it's a point cloud,</p> <p>6 correct, scan?</p> <p>7 A. You use the scan. But you also</p> <p>8 put in hundreds of photos. And the --</p> <p>9 Q. Okay.</p> <p>10 A. If your scan is accurate and your</p> <p>11 photos are decent, it can -- it can create a</p> <p>12 photomodel, which is more than just a point</p> <p>13 cloud.</p> <p>14 Q. I got you. So it uses both the</p> <p>15 point cloud and the photographs and all of that</p> <p>16 combined?</p> <p>17 A. Yes.</p> <p>18 Q. Okay. And then the software then</p> <p>19 based upon you indicating the points will tell</p> <p>20 you the 3D distance between the two points?</p> <p>21 A. Right.</p> <p>22 Q. And that's what the pink line</p> <p>23 is -- is represents?</p>	<p style="text-align: right;">Page 273</p> <p>1 again and come up with a little bit different</p> <p>2 number, I'm okay with that.</p> <p>3 Q. Sure. And then as far as the</p> <p>4 bottom of the arc, you just eyeballed that.</p> <p>5 That's in your mind an approximate bottom of</p> <p>6 the middle of the arc of the F-250?</p> <p>7 A. Right. If I were going to do it</p> <p>8 again, I might move them both left about a</p> <p>9 quarter of an inch, but it's still going to be</p> <p>10 eleven inches. Well, this is actually a little</p> <p>11 less than eleven inches. So it's going to be</p> <p>12 right at eleven.</p> <p>13 Q. All right. Did you undertake any</p> <p>14 other methodology to determine the offset in</p> <p>15 the subject crash?</p> <p>16 A. Other than using our scan, no.</p> <p>17 But it's not written down or recorded. It's</p> <p>18 just clicking on a scan. I used the scan of a</p> <p>19 depo, say a twelve, and then I'm using this to</p> <p>20 get a little less than eleven. I'm -- I'm</p> <p>21 convinced eleven is the right number.</p> <p>22 Q. All right. What is the relevance</p> <p>23 of the crash test offset not matching the</p>

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<p style="text-align: right;">Page 274</p> <p>1 subject crash offset? Why is that relevant to 2 you? 3 A. You're engaging less of the back 4 of the Escape, so you're still -- you're still 5 hitting, you know, at the frame level. But 6 you're engaging less of the back of the Escape. 7 So you know, it's -- it -- it probably 8 overstates the crush from that, just one 9 observation. And what we'd like to see is a -- 10 is something that doesn't have unnecessary 11 variables. We have a lot of variables in the 12 crash test, too many to actually get a final 13 opinion out of anything other than that, hey, 14 it didn't override, which we already knew it 15 wasn't going to override, you know, just based 16 on the structure of the vehicles and their 17 original design. We didn't need a crash test 18 for that, but other -- that's -- that's what it 19 provides. Beyond that, I don't know that it 20 provides information. 21 Q. Okay. And when you say it 22 probably overstates the crush, have you 23 undertaken any work to determine whether it</p>	<p style="text-align: right;">Page 276</p> <p>1 Q. Okay. And so you're not able to 2 quantify the difference in crush that would be 3 caused by the alleged five plus or minus one 4 inch additional offset that occurred in the 5 crash test? 6 A. No. 7 Q. Okay. Hold on one second. I 8 thought somebody on here was sending me a chat. 9 So -- apparently not. So I'm sorry. 10 Is one way that you could make an effort to 11 quantify the difference in crush that would be 12 attributed to an increase in offset would be to 13 run an HVE simulation, use your exact 14 parameters that you used in your simulation, 15 and increase the offset and then see what the 16 program spit out as far as an increase in 17 crush? 18 A. I don't know. 19 Q. So you don't know if the software 20 would be able to tell you the difference in 21 crush based upon a difference in offset? 22 A. Not to the level the crash test 23 would have done with accuracy. I think</p>
<p style="text-align: right;">Page 275</p> <p>1 does overstate the crush? 2 A. Well, logic would say that it 3 would. But since we don't have a crash that 4 represents, you know, the proper elevation, the 5 proper over -- over -- overlap, all we can say 6 is that it probably does because as Mr. Grimes, 7 he confirmed that in his deposition. We know 8 that -- we know historically that the less 9 overlap we have, the more crush we have because 10 the width and the depth are the two things that 11 develop crush -- that determine crush. If we 12 have less width, we have more crush, because 13 they're mathematically related in the physics, 14 in the calculations that we -- we use in 15 accident reconstruction. So the formulas we 16 have state that there will be less -- will be 17 more crush in the test because it has less 18 offset or more offset. 19 Q. And did you make any effort to 20 calculate the -- the increase in crush that you 21 say would be attributed to an increase in 22 offset? 23 A. No, I have not.</p>	<p style="text-align: right;">Page 277</p> <p>1 intuitively we all know there would be more 2 crush. But we don't know if it would be 3 representative. And we don't know if it would 4 be a reliable methodology because we've been 5 through that already. That's -- that's a -- a 6 simulation compared to a crash test. Grimes 7 used a crash test to try to compare the 8 accident. And now you're going to do a 9 complete new analysis to compare a simulation 10 to a crash test. That's -- that's not possible 11 to do sitting here. We've been through this. 12 Q. Well, I'm not asking you about 13 that. I'm asking you, you could run an HVE 14 simulation with increased offset and compare 15 that to your other simulation, and so you'd be 16 comparing the exact identical simulations with 17 the only change being the offset. That's 18 possible. Correct? 19 A. Nope. For the reasons we talked 20 about, I cannot agree with you on that. 21 Q. Okay. 22 A. Thank you. 23 Q. Yeah. So it's not possible to run</p>

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<p style="text-align: right;">Page 278</p> <p>1 your exact same simulation, but increase the 2 offset to 17 inches. That's not -- 3 MS. CANNELLA: Objection. Asked 4 and answered multiple times for hours on end. 5 Q. You can answer. 6 A. I've answered that as good as I 7 can. I don't have any more to say. I mean -- 8 I -- I do not -- I cannot say that we can do 9 that, no, for all of the reasons I've been 10 going over. 11 Q. And therefore you cannot say 12 whether that would be an appropriate 13 methodology for verifying whether the HVE 14 software is a scientifically reliable 15 methodology for predicting crush? 16 A. Pardon? 17 Q. Yeah. If you can't say that any 18 variation in offset is necessarily going to be 19 a reliable HVE test, that's what you're saying 20 is that the only reliable HVE test you know of 21 or simulation you know of is the one you ran. 22 And if you change the offset, you can't verify 23 whether that simulation would be a reliable and</p>	<p style="text-align: right;">Page 280</p> <p>1 characterizing his testimony -- or 2 mischaracterizing it. 3 MR. HILL: I've asked him that. 4 Q. Would a -- do you have an opinion 5 as to whether an HVE simulation run exactly the 6 way you ran the simulation in this case, your 7 amended simulation, with the only change being 8 to increase the offset to the offset that you 9 said occurred in the crash test, do you have an 10 opinion as to whether that simulation would be 11 a proper scientific methodology to evaluate 12 what the simulation would produce at that 13 different offset? 14 MS. CANNELLA: Object to the form 15 of the question. Asked and answered. Outside 16 the form -- the scope of his supplemental 17 testimony. He did not run an HVE on the 18 Exponent crash test, and he has explained 19 multiple times why he cannot tell you whether 20 it would be an accurate methodology as he sits 21 here today. This is a conversation we already 22 had, and you said you were done with this line. 23 MR. HILL: Yeah, I'm asking in a</p>
<p style="text-align: right;">Page 279</p> <p>1 accurate simulation? 2 MS. CANNELLA: Objection. He did 3 not say that the only reliable HVE he's ever 4 seen is the one that he ran. 5 Q. All right. You can explain it. 6 MS. CANNELLA: What's the 7 question? I mean, object to the form of the 8 question. Misstates his testimony. 9 Q. Go ahead. Answer it if you can. 10 MS. CANNELLA: No. Don't answer 11 it, Bryant. It doesn't -- it's not a 12 question -- it's not a question that makes any 13 sense because he never said that. So how can 14 he answer that if you're saying he said that 15 and he didn't say that. 16 MR. HILL: Are you instructing him 17 not to answer? 18 MS. CANNELLA: Yes, I'm 19 instructing him not to answer because it's 20 getting crazy. You keep telling him your -- 21 it's your testimony that X, Y, Z and he doesn't 22 testify to those things. So ask him whatever 23 question you want to ask him without</p>	<p style="text-align: right;">Page 281</p> <p>1 different way now. I'm -- I'm not talking 2 about comparing it to the crash test. All 3 right? I'm saying -- he says that there is a 4 differentiation in crush that occurs based upon 5 the level of offset. And I'm asking him, is it 6 his opinion that it's impossible to use HVE to 7 determine how much additional crush occurs per 8 a set distance of offset. 9 Q. Is it your opinion that that's 10 impossible to use HVE for that type of 11 determination? 12 MS. CANNELLA: Same objections. 13 Q. Go ahead. 14 A. I answered the question. It's not 15 using HVE. I just used standard accident 16 reconstruction calculation methodologies for 17 crush and width. There is a relationship 18 between the two. And when width is decreased, 19 crush goes up by every formula that I've ever 20 seen written in accident reconstruction. 21 As for as using the simulation, I haven't 22 done that analysis and I'm totally 23 uncomfortable for the reasons we've been over</p>

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<p style="text-align: right;">Page 282</p> <p>1 many times already. I cannot tell you that we 2 could use the simulation for that, the way 3 you're asking and I don't -- because that's 4 a -- that's a new analysis, and I'm not willing 5 to -- to state we can. I'm not even willing to 6 start doing the analysis here. But I did try 7 to give you some examples earlier, my concerns. 8 But no, I don't have an opinion about that. 9 And -- but I do have an opinion that decreasing 10 width -- increased width of overlap increases 11 crush. And we know that because every single 12 crush formula that's ever been written that I'm 13 aware of that we use our calculators for, 14 would -- would show that there is a 15 relationship that when the width is -- is 16 decreased, the crush increases. 17 Q. Would you agree that in order for 18 the HVE simulation to be a reliable methodology 19 as you've used in this case, that software 20 would need to follow that same relationship you 21 just mentioned that the calculations show as a 22 part of science, it would need to follow that 23 same methodology in order to mirror the actual</p>	<p style="text-align: right;">Page 284</p> <p>1 could there be a scenario where HVE, as you 2 increase the offset, it doesn't match the 3 mathematics that show how much crush should 4 increase as you increase the offsets? 5 A. You're asking a blind question 6 with information that I don't know what you're 7 asking about. You won't even let me relate it 8 to the crash test. So you know, we've -- we've 9 used it to change one variable, the height, so 10 that we got contact. And I think it's very 11 robust for that near -- with -- with lots of 12 overlap between the vehicles. That's what we 13 use it for. Beyond that, all of these other 14 things, I -- I don't have any opinions about 15 those. I can't help you. 16 Q. Okay. 17 A. But I can tell you that -- that, 18 you know, there is a relationship between crush 19 and width and the program will generally follow 20 that. But there are other concerns that have 21 to be all addressed before we can start 22 agreeing to -- to what you're asking me to 23 agree to. I can't do that.</p>
<p style="text-align: right;">Page 283</p> <p>1 science that you know of with regards to the 2 truck? 3 MS. CANNELLA: Object to the form 4 of the question as vague and confusing. 5 Q. Go ahead. 6 A. In general we know that we'll 7 follow that generic methodology, but that's 8 generic. In other words, but to apply it to a 9 particular crash test, which is what you're 10 asking me to do, you would have to go through a 11 whole process to see whether it was applicable 12 and reasonable. 13 Q. I'm not -- 14 A. I'm sorry. I haven't done that. 15 And so the answers I've given have been true 16 and accurate today. We're not -- we understand 17 how the simulation works. We understand how 18 the calculations work. That's fine. We just 19 can't make the leap -- and is it a leap you're 20 asking. 21 Q. Well, I'm not asking you to 22 compare it to the crash test. I'm asking a 23 simple -- I won't use the term simple, but</p>	<p style="text-align: right;">Page 285</p> <p>1 Q. What is your basis for your 2 opinion that changing the height of the vehicle 3 allows HVE to be a robust simulation program 4 and to properly simulate the hypothetical crash 5 with the height being changed? What's your 6 basis for that opinion? 7 MS. CANNELLA: Object to the form 8 of the question as vague, confusing. 9 Q. Go ahead. 10 A. Because we now -- once we remove 11 the lift kit, we've got now a bumper level, 12 frame level to frame level, bumper level 13 impact. The simulation program, I've been 14 using it since 19 -- 1991, so over 30 years for 15 things like this, and it's been acceptable 16 since for that period of time. There's been 17 plenty of papers written to validate its 18 reasonableness. It came with the crush 19 stiffness coefficients that were needed to do 20 it. All I had to do was tell it the speed at 21 impact and I could verify that those speeds we 22 got the delta-V's. So -- so I have -- I'm 23 using it well within its constraints. And I</p>

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<p style="text-align: right;">Page 286</p> <p>1 don't have any concerns about how the vehicle 2 was contacted because I'm getting that good -- 3 that good match up that I think would have 4 happened in the accident had it not been a -- 5 not jacked up, but raised, lifted. So I think 6 I'm using the program exactly as it's supposed 7 to be used for -- for this particular purpose 8 and how I've seen it used before. 9 Q. And if you change the offset, you 10 don't have an opinion as to whether you'd be 11 using the program exactly as it's designed to 12 be used? 13 A. You'd have to go through the 14 analysis before you used it. It wouldn't be 15 right just to say, yeah, let's just go use it 16 for whatever -- you know, someone can ask a 17 question about it. I'd need to take the time 18 to look at it as an engineer. I mean, that's 19 the truth. 20 Q. So if you changed the offset and 21 ran it, what would -- what kind of result would 22 you need to analyze or look at to decide as an 23 engineer whether it was still valid at the</p>	<p style="text-align: right;">Page 288</p> <p>1 that HVE -- that your HVE simulation in this 2 case is accurate? Is there any way you know of 3 other than citing to the fact that you believe 4 there's articles that say it's a proper 5 software for this application? Is there 6 anything you can do beyond what you've read or 7 what others have said in order to test or 8 verify that your simulation was accurate? 9 A. This is a tool that we commonly 10 use. It's generally accepted in the industry. 11 I'm using it simply as it would normally be 12 used in accident reconstruction to demonstrate 13 a -- a crash, to simulate a crash. There is 14 nothing special about what I'm doing. I've got 15 the shape of the vehicles. I have the crush 16 stiffness for the vehicles that came with the 17 program. I'm hitting it at a known speed. And 18 i'm producing a known delta-V. It is -- unless 19 you call into question the whole program, which 20 it's been used for -- I've been using it for 30 21 years and never had a problem using it or 22 having it utilized. I did vet it before I used 23 it. I made sure it was appropriate. There's</p>
<p style="text-align: right;">Page 287</p> <p>1 different offset level? 2 MS. CANNELLA: Objection. I'm 3 sorry, I feel like you're drawing this 4 objection, but don't answer it anymore. We're 5 done with this. I can point to the Court to 6 hours of this question over and over again. 7 And we're not doing it anymore. 8 MR. HILL: Are you instructing him 9 not to answer? 10 MS. CANNELLA: Yes, I am. It's 11 five o'clock. We've been going for -- since 12 ten o'clock this morning and we've had many, 13 many discussions about this exact topic. 14 MR. HILL: That's great. We'll 15 take it up with the Court. We've had hours of 16 discussions about it because he refuses to 17 answer the question, but that's fine. 18 MS. CANNELLA: I've even answered 19 it for you. I've rephrased -- rephrased what 20 he said. So I don't know what else you want, 21 Mr. Hill. This is a wild experience. 22 MR. HILL: It's... 23 Q. How can you independently verify</p>	<p style="text-align: right;">Page 289</p> <p>1 other programs that I might use for other types 2 of things. You know, you're -- it's kind of 3 like what you did earlier when we were asked 4 about how can you tell where an impact was. 5 You look at maximum engagement crush. Well, 6 that's what we use. We don't get to the 7 vehicle's hit. We use maximum engagement crush 8 and we follow generally accepted principles. 9 It's generally accepted to use computer 10 simulations like HVE, S-Mac, SIMON in the 11 industry. It's one of our normal calculation 12 tools just like a calculator is a normal 13 calculation tool. If it had not been generally 14 accepted, then I wouldn't be using it. But we 15 did it by hand or on a calculator. We got a 16 crush level. Then we did it with a simulation 17 program. We got different results. And for 18 mine I'm using the higher of the two. I'm 19 using it as just an alternative calculation 20 methodology, which is appropriate. So I 21 believe it's reasonably accurate. Not 22 perfectly, but I believe it's reasonably 23 accurate for what it was designed to be used</p>

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<p style="text-align: right;">Page 290</p> <p>1 for. And I think that if we -- if I go do the 2 research, I'll find plenty of papers that show 3 that to you. I've been using it for 30 years. 4 Q. Are there any other simulation 5 software programs you could use other than HVE? 6 A. Let's do something else. 7 Mr. Grimes, I think, claims to be an instructor 8 in it. Who is he instructing -- if it's -- if 9 it's not a valid tool for accident 10 reconstruction, why is he using it? Why is he 11 instructing it? It's -- he's used it. He 12 knows it's valid. It's a good tool for the 13 purpose. His only complaint was that it was an 14 override. I can show you why it's not an 15 override. It's clearly not an override. And 16 if -- if you take his objection away that it's 17 an override, then he is as far as I can tell 18 agreeing to use it because he had no other 19 objection in his deposition to it. 20 Q. All right. Did you see his 21 testimony where he unequivocally testified that 22 HVE is not an appropriate software to use in a 23 situation like this where you have a complex</p>	<p style="text-align: right;">Page 292</p> <p>1 do every day that are based on the works of 2 Campbell and others in the past, well, I'd have 3 to go back and do all of the work. That -- 4 that groundwork has been laid by others, 5 otherwise this simulation program wouldn't 6 be -- having been used by me for 30 years and 7 others in the industry, like Mr. Grimes. I'm 8 not going to go back and redo all of the 9 validation of the program. That's been done 10 by others. Just like the crush calculations 11 that we normally do are and the methodologies 12 that we use in the book over there. The book 13 behind me says HVE is a robust method. You 14 know, I'm -- I'm using a tool that's generally 15 accepted in the industry in a way that's 16 generally accepted in the industry. I don't 17 know what else I -- I mean, I'm not going to go 18 back and -- and redo all of that history of 19 work and research. And I've paid people to 20 train me in using it. 21 Q. Do you know whether you can run 22 a -- other HVE simulation and compare it to 23 yours and use that as a way to validate the</p>
<p style="text-align: right;">Page 291</p> <p>1 crush situation? He clearly gave the opinion 2 that when he teaches classes on this, he 3 instructs people not to use it in this 4 environment? 5 A. Well, that's a conversation you 6 and him had because he didn't say that under 7 oath in the deposition. 8 Q. I would ask you to go back and 9 read it. Are you aware of any other simulation 10 software that you could have used to run your 11 simulations in this case? 12 A. No. 13 Q. Okay. And I want to go back to my 14 question, and this is different. It's -- I 15 understand all of your basis to believe that 16 HVE is an appropriate simulation tool for you 17 to use to test your hypothetical crash at a 18 different height. I understand all of that. 19 My question is, is there any independent way 20 for you to verify that your simulation in this 21 case was accurate? 22 A. Well, is there an independent way 23 for me to verify that the hand calculations we</p>	<p style="text-align: right;">Page 293</p> <p>1 accuracy of your simulation? 2 A. Oh, that's -- that's like -- 3 that's a broad, broad can of worms. You know, 4 I -- there's -- there's about 400 answers to 5 that question. I'm not sure what you're -- 6 what you're poking at. 7 Q. All right. I'll put it this way. 8 If we ran an actual crash test and we ran it 9 identical to your simulation in this case where 10 the speeds were identical to your simulation, 11 the weights, everything was identical, the 12 impact point offset identical, what should the 13 result of that actual crash test be? Should it 14 mirror your simulation? 15 A. It should be whatever the answer 16 is. 17 Q. So you can't -- 18 A. The simulation -- 19 Q. -- state whether -- I'm sorry. I 20 thought you finished. 21 A. The simulations is -- all 22 calculations are simulations. All simulations 23 are approximations of reality. The -- the</p>

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<p style="text-align: right;">Page 294</p> <p>1 results of the test would be the results of the</p> <p>2 test if someone would do it that way. And then</p> <p>3 you'd have those results, and you wouldn't need</p> <p>4 the simulation.</p> <p>5 Q. Okay. And so if the results of</p> <p>6 that actual crash test were different than the</p> <p>7 simulation, you would defer to the actual crash</p> <p>8 test, and you wouldn't need the simulator?</p> <p>9 A. If it was as you said, yes.</p> <p>10 Q. Okay. And if it varied from the</p> <p>11 actual crash test, would that be evidence to</p> <p>12 you that the simulation was not scientifically</p> <p>13 reliable in predicting the real world crash?</p> <p>14 A. No. A simulation is exactly that.</p> <p>15 It's a simulation. It's -- it's not the real</p> <p>16 world. If you could actually -- and let's just</p> <p>17 be clear here, you are not referring to the</p> <p>18 test run by Grimes and --</p> <p>19 Q. No, I'm not.</p> <p>20 A. Okay. So if someone were to</p> <p>21 actually do one along the certain path, it</p> <p>22 wouldn't invalidate the simulation because the</p> <p>23 simulation is -- is what it is. It's an</p>	<p style="text-align: right;">Page 296</p> <p>1 (A break was taken.)</p> <p>2 THE VIDEOGRAPHER: The time is</p> <p>3 5:34 p.m. We're back on the record.</p> <p>4</p> <p>5 EXAMINATION</p> <p>6 BY MS. CANNELLA:</p> <p>7 Q. Mr. Buchner, did you do the work</p> <p>8 that's reflected in your May 2024 report to</p> <p>9 formulate new opinions or to show the work and</p> <p>10 how you developed opinions in your original</p> <p>11 report?</p> <p>12 A. Our amended report was just to</p> <p>13 provide the basis for the opinions that were</p> <p>14 already given. There aren't any new opinions</p> <p>15 in there. It was just -- just trying to make</p> <p>16 sure we had the supporting materials.</p> <p>17 Q. And did your opinions base -- did</p> <p>18 your opinions change based on what was</p> <p>19 disclosed in May?</p> <p>20 A. No.</p> <p>21 Q. All right. When you were talking</p> <p>22 about working in the simulation files, can you</p> <p>23 explain when you run a simulation and you run</p>
<p style="text-align: right;">Page 295</p> <p>1 approximation of reality. It's not reality.</p> <p>2 But if you had reality, you would use reality.</p> <p>3 Q. Okay.</p> <p>4 MR. HILL: All right. I believe</p> <p>5 that's all I have. Thank you, Mr. Buchner.</p> <p>6 Sorry if we got a little testy there. That's</p> <p>7 normally not my style. But I -- I apologize</p> <p>8 for that. And I -- I know in the future I will</p> <p>9 try to avoid that. It was a little bit of</p> <p>10 making sure you heard me and a little bit of</p> <p>11 frustration. I appreciate your time, and --</p> <p>12 and thank you.</p> <p>13 THE WITNESS: Wimbledon is going</p> <p>14 on right now, and those -- those competitors</p> <p>15 are intense and they do their job well and then</p> <p>16 they shake hands at the end. I'm -- I'm more</p> <p>17 than happy to have talked to you today.</p> <p>18 MS. CANNELLA: Can we take a break</p> <p>19 and let me just see if I have anything?</p> <p>20 MR. HILL: Sure. I need to use</p> <p>21 the restroom anyway. So...</p> <p>22 THE VIDEOGRAPHER: The time is</p> <p>23 5:19 p.m. We're now off the record.</p>	<p style="text-align: right;">Page 297</p> <p>1 different iterations of it, is that akin to,</p> <p>2 like, editing in a document? Like, in other</p> <p>3 words, when you run a simulation, do you create</p> <p>4 a new -- well, strike that. That's a bad</p> <p>5 question.</p> <p>6 When you run a simulation, are you creating</p> <p>7 a new thing or are you just editing the -- the</p> <p>8 inputs that are on the program?</p> <p>9 A. Well, you have to open it. And</p> <p>10 then once you open it, if you're typing a</p> <p>11 letter, every paragraph you type is new. It's</p> <p>12 not -- it's -- just every keystroke is new.</p> <p>13 You have to build it and work through it. Same</p> <p>14 thing with simulation. You have to start with,</p> <p>15 you know, opening it up, getting the vehicles</p> <p>16 imported, positioning the vehicles, telling the</p> <p>17 program what speeds to use, updating the --</p> <p>18 it's just an ongoing typing process, you know,</p> <p>19 that doesn't -- you know, you just keep -- keep</p> <p>20 inputting the data until you get it all in</p> <p>21 there. And it runs using the proper data, and</p> <p>22 then you save it.</p> <p>23 Q. So if we were to equate it to</p>

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<p style="text-align: right;">Page 298</p> <p>1 using a Word software and, you know, we were 2 editing a document as we go along, we could 3 just delete a paragraph or rewrite a paragraph, 4 for example, we haven't created an entirely new 5 document when we do that; we're just editing 6 that document? 7 A. Right. That's the way it works. 8 Q. Okay. So you're kind of inputting 9 different data points or assumptions and then 10 seeing what happens in the outcome? 11 A. Well, right. You're -- you're not 12 necessarily putting in different assumptions. 13 You're -- you're trying to get the data 14 properly input, but it takes time to do that. 15 You do make mistakes too. I mean sometimes the 16 car goes backwards because you've got the 17 velocity stuck in the wrong way. So you got to 18 fix that problem. 19 Q. Were any files deleted that you 20 know of? 21 A. No. Other than the -- somehow 22 the -- the original run file or the final run 23 file, I can't get it. I don't know where it</p>	<p style="text-align: right;">Page 300</p> <p>1 it's -- it's, you know, 20 to 30 pounds worth 2 of fluid usually. To a big F-250, maybe it's a 3 hair more. But our calculations are not that 4 precise. We're -- we're looking, you know, for 5 a reasonable answer. 6 Now, we did weigh the vehicles, so it means 7 we are very close to the weight of the 8 vehicles. It's much better than using 9 specifications. When you use specifications 10 they have one weight for virtually every 11 vehicle that was made that year, you know. 12 So -- it's -- it's -- we've already started out 13 being more accurate because we actually have 14 the vehicles with the various -- the type of 15 battery. The type of battery can change the 16 weight of a car. We don't ever change the type 17 of battery. But we weigh the car with the 18 battery that's in it, in it. So you know, 19 changes of a few hundred pounds usually are 20 inconsequential. If we think they are 21 consequential, then we'll be, you know, will be 22 more robust. Usually a few hundred pounds is 23 -- is inconsequential.</p>
<p style="text-align: right;">Page 299</p> <p>1 is. But there's no intent to delete any files. 2 It's just updating and keep running. Every now 3 and then a backup will get made or something 4 like that. We're still just working on the 5 same file. 6 Q. Right. Okay. The -- there was 7 some discussion about how much -- or that the 8 fluid had leaked out of the radiator in the 9 subject -- in the subject F-250 when you 10 weighed it, and the weight of the glass that 11 was broken, and so there was some broken shards 12 in the car and some broken shards out of the 13 car. Can you talk a little bit about 14 differences in weight and when there's kind of 15 a tipping point of -- of how much weight 16 matters when there's variations like that? 17 A. Well, the vehicles weigh thousands 18 of pounds. You know, we normally don't even 19 consider the -- the change of weight in a gas 20 tank to be particularly critical. And but as 21 far as glass and, you know, radiator fluid, 22 that's -- I don't know that I've ever added 23 water in for a leaking radiator fluid because</p>	<p style="text-align: right;">Page 301</p> <p>1 Q. The differences that the 2 Rough Country lawyer asked you about between 3 the HVE and the subject wreck or subject 4 vehicles include the fact that the HVE didn't 5 have a sunroof in that design using -- and I 6 think you spoke to this to some degree, but 7 using the sunroof or the -- the vehicle without 8 the sunroof would actually make the results of 9 your analysis less favorable to Plaintiffs. 10 Correct? In other words, it would mean -- it 11 would mean that there would be more crush in 12 the HVE than if you used a structure that had 13 that extra support in it? 14 A. Well, HVE does not have the 15 capability to include or exclude a sunroof 16 specifically. What it -- the way it's included 17 is with the crush stiffness coefficients. So 18 you know, we would -- so that's actually a 19 user -- we can put one in that looks like it's 20 got a sunroof. But HVE is really using the 21 data from crash tests or the crush stiffness 22 coefficients derived from past accidents or 23 crash tests to -- to -- to do a calculation</p>

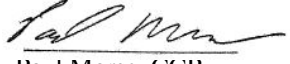
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<p style="text-align: right;">Page 302</p> <p>1 model. It doesn't -- we tell it about those 2 things. The program doesn't know about those 3 things. But to know whether or not our data 4 included a sunroof or not specifically, we'd 5 need to go back -- you'd have to go back to the 6 original crash tests and things. But in this 7 case, HVE has the number in there. It's robust 8 enough for what we were doing with or without. 9 But if I were going to run a crash test, I 10 would try to get the same vehicle and use it 11 because the roof does get involved in a crash 12 test. 13 Q. The -- I was sitting here trying 14 to think when I've seen HVE used by automakers. 15 And have you seen automakers use HVE to 16 simulate NTSA, federal FMVSS testing, dynamic 17 testing? 18 A. Yes. Yes, I've seen studies done 19 using it to try to predict what will happen 20 in -- in accidents or crashes of -- of designed 21 like various crash test and whatnot. 22 Q. Okay. And the government 23 accepts -- accepts the certifications based on</p>	<p style="text-align: right;">Page 304</p> <p>1 Q. All right. And so we'll mark that 2 as Plaintiff's Exhibit 1. 3 MS. CANNELLA: That's all I have. 4 MR. HILL: That's all the 5 questions you have, you said? 6 MS. CANNELLA: Yes. 7 MR. HILL: All right. I've just 8 got one quick follow-up based upon what you 9 just asked. 10 11 EXAMINATION CONTINUED 12 BY MR. HILL: 13 Q. In this case, Mr. Buchner, do you 14 intend to give any opinion as to whether 15 Rough Country could have used HVE prior to this 16 incident to simulate crashes involving vehicles 17 with their lift kits in place? 18 A. I know they could have considered 19 it. I don't know if they could have. I'd have 20 to do a little consideration and come up with 21 an exact answer. But it's one of the tools 22 that is available for consideration, yes. 23 Q. I believe you've testified that</p>
<p style="text-align: right;">Page 303</p> <p>1 HVE-type testing? 2 A. Right. The government doesn't 3 require a crash test. They just require the 4 manufacturer to certify that if they do, do the 5 crash test, it will pass it. And the 6 manufacturers have lots of tools at that. And 7 HVE is one of those types of tools, just like 8 the government has HVE available to do a study 9 if they want to avoid all of the expenses of 10 doing actual crash testing. So I'm pretty sure 11 all of that is common in the industry. I 12 didn't pull any reference to that. I didn't 13 expect that to be an issue here. But yes, it 14 can be used for those types of things. And in 15 my opinion, it has. 16 Q. Okay. And I'm going to mark the 17 visual that Rough Country showed you as 18 Plaintiff's Exhibit 1 to your deposition. I 19 can share my screen and pull that up. One 20 second. Okay. Can you see that? 21 (Plaintiff's Exhibit Number 1 22 is marked for identification.) 23 A. I can.</p>	<p style="text-align: right;">Page 305</p> <p>1 you did not use HVE to simulate the actual 2 crash in this case because the override would 3 prevent the program from being designed as 4 used, which is when there's bumper-to-bumper or 5 structure-to-structure impact. 6 MS. CANNELLA: This is outside the 7 scope of the supplemental report. 8 Q. Go ahead. 9 A. That's not exactly -- 10 MS. CANNELLA: There's no 11 question. 12 A. Okay. I don't think that that's 13 what I said, but thank you. 14 Q. Well, was there any testimony that 15 you gave in your original deposition regarding 16 the usage of HVE that you intend to change 17 based upon your supplemental work in this case 18 and since the time of your first deposition? 19 MS. CANNELLA: Object to the form 20 of the question. It's vague. 21 A. Yeah, I -- I actually haven't -- I 22 can't tell you exactly what I said in the first 23 deposition.</p>

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<p style="text-align: right;">Page 306</p> <p>1 Q. Right. But as we -- go ahead. 2 Sorry. I thought you were finished. 3 A. I did the best I could to answer 4 the questions at the time. But I don't -- I 5 don't have any comments one way or the other as 6 I sit here. 7 Q. Okay. And how -- how do you 8 define a couple hundred pounds? Just to make 9 sure there's no discrepancy there, in answering 10 those -- in all those questions, I believe you 11 said a couple hundred pounds this way or that 12 way is not a weight that would concern you. 13 What -- what is a couple hundred pounds? 14 A. I thought I actually said a few 15 hundred pounds. 16 Q. Yeah. So what's a few. Yep. 17 Thank you for correcting me. 18 A. Just starting out for vehicles of 19 this size, you know, 300 pounds -- if it was 20 getting close to 300 pounds, I might start 21 worrying about it. But you know, I don't -- in 22 this case we tried to get the -- the weights 23 more accurate. That's why we weighed it. I</p>	<p style="text-align: right;">Page 308</p> <p>1 A. Yeah. But there's no -- there's 2 no one exact right answer. I mean, if it's 3 a -- if it's a motor scooter off by 200 pounds, 4 we've got a real problem. If it's a tractor 5 trailer off by 200 pounds, it's more than 6 irrelevant -- 7 Q. Well, I'm talking about vehicles 8 in this case. 9 A. I know. I know. But we've got 10 one really big vehicle and one smaller vehicle. 11 So you know, the big vehicle, you can have much 12 larger discrepancies and it's irrelevant than 13 the smaller vehicle. So there isn't one answer 14 for this. We want to be close. We like to 15 be -- a hundred pounds I'm not even going to 16 bat an eye at. Two hundred pounds, that's 17 normal between experts to be off a couple 18 hundred pounds. I'm not arguing about that. I 19 don't think Mr. Grimes is either. He says our 20 weights are different but our weight ratios 21 are, you know, very close to the same. You 22 know, we have a depth of knowledge that's 23 greater than just 200 pounds is the go or</p>
<p style="text-align: right;">Page 307</p> <p>1 had those vehicles weighed. I made sure they 2 were weighed so we had the best starting point 3 we could. So little things like a lit bit of 4 radiator fluid is -- is inconsequential. 5 Because if you just use the specs, you don't 6 know how far off you are when you're starting. 7 The specs are -- in my experience, with all the 8 number of vehicles that I have weighed, I've 9 had them off over a thousand pounds. So you 10 know, in this case I wanted it close. I wanted 11 it within, you know, one or two hundred pounds 12 for sure. So we -- we weighed them and then 13 added in reasonable weights. 14 Q. Sure. 15 A. But I don't have an exact number. 16 But we're -- we're close enough for what I've 17 done it -- for the work that I've done. I'm 18 sure of that. 19 Q. Sure. So if the weights are 20 within 200 pounds, you would consider that to 21 be accurate enough -- accurate enough from a 22 weight perspective to properly test the 23 vehicles?</p>	<p style="text-align: right;">Page 309</p> <p>1 no-go. It's not a pass/fail. Get it 2 reasonably close. And at a few hundred pounds, 3 that's generally always reasonably close. 4 Q. Okay. Great. 5 MR. HILL: Thank you for your 6 time. That's all I have. 7 THE WITNESS: Okay. 8 THE VIDEOGRAPHER: Anything 9 further? 10 MS. CANNELLA: No. 11 THE VIDEOGRAPHER: All right. 12 This concludes the videotaped deposition. 13 We're off the record at 5:48 p.m. 14 MS. CANNELLA: Do you want to read 15 and sign? 16 THE WITNESS: I want to read. 17 18 19 (The deposition ended at 5:50 p.m. EST.) 20 21 22 23</p>

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<p>1 REPORTER'S CERTIFICATE</p> <p>2 STATE OF ALABAMA,</p> <p>3 BALDWIN COUNTY,</p> <p>4 I, Paul Morse, Certified Court Reporter</p> <p>5 and Commissioner for the State of Alabama at</p> <p>6 Large, do hereby certify that the above and</p> <p>7 foregoing proceedings was taken down by me by</p> <p>8 stenographic means, and that the content herein</p> <p>9 was produced in transcript form by computer aid</p> <p>10 under my supervision, and that the foregoing</p> <p>11 represents, to the best of my ability, a true</p> <p>12 and correct transcript of the proceedings</p> <p>13 occurring on said date and at said time.</p> <p>14 I further certify that I am neither of</p> <p>15 kin nor of counsel to the parties to the action</p> <p>16 nor in any manner interested in the result of</p> <p>17 said case.</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22 </p> <p>23 Paul Morse, CCR</p> <p>24 ACCR #588 Expires 9/30/24</p>	<p>1 Bryson, Santana And Joshua v. Rough Country, LLC</p> <p>2 G. Bryant Buchner (#6793607)</p> <p>3 E R R A T A S H E E T</p> <p>4 PAGE____ LINE____ CHANGE_____</p> <p>5 _____</p> <p>6 REASON_____</p> <p>7 PAGE____ LINE____ CHANGE_____</p> <p>8 _____</p> <p>9 REASON_____</p> <p>10 PAGE____ LINE____ CHANGE_____</p> <p>11 _____</p> <p>12 REASON_____</p> <p>13 PAGE____ LINE____ CHANGE_____</p> <p>14 _____</p> <p>15 REASON_____</p> <p>16 PAGE____ LINE____ CHANGE_____</p> <p>17 _____</p> <p>18 REASON_____</p> <p>19 PAGE____ LINE____ CHANGE_____</p> <p>20 _____</p> <p>21 REASON_____</p> <p>22 _____</p> <p>23 _____</p> <p>24 G. Bryant Buchner Date</p> <p>25</p>
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<p>1 Tedra L. Cannella</p> <p>2 tedra@cannellasnyder.com</p> <p>3 August 2, 2024</p> <p>4 RE: Bryson, Santana And Joshua v. Rough Country, LLC</p> <p>5 7/11/2024, G. Bryant Buchner (#6793607)</p> <p>6 The above-referenced transcript is available for</p> <p>7 review.</p> <p>8 Within the applicable timeframe, the witness should</p> <p>9 read the testimony to verify its accuracy. If there are</p> <p>10 any changes, the witness should note those with the</p> <p>11 reason, on the attached Errata Sheet.</p> <p>12 The witness should sign the Acknowledgment of</p> <p>13 Deponent and Errata and return to the deposing attorney.</p> <p>14 Copies should be sent to all counsel, and to Veritext at</p> <p>15 cs-southeast@veritext.com.</p> <p>16 Return completed errata within 30 days from</p> <p>17 receipt of testimony.</p> <p>18 If the witness fails to do so within the time</p> <p>19 allotted, the transcript may be used as if signed.</p> <p>20</p> <p>21</p> <p>22 Yours,</p> <p>23 Veritext Legal Solutions</p> <p>24</p> <p>25</p>	<p>1 Bryson, Santana And Joshua v. Rough Country, LLC</p> <p>2 G. Bryant Buchner (#6793607)</p> <p>3 ACKNOWLEDGEMENT OF DEPONENT</p> <p>4 I, G. Bryant Buchner, do hereby declare that I</p> <p>5 have read the foregoing transcript, I have made any</p> <p>6 corrections, additions, or changes I deemed necessary as</p> <p>7 noted above to be appended hereto, and that the same is</p> <p>8 a true, correct and complete transcript of the testimony</p> <p>9 given by me.</p> <p>10</p> <p>11 _____</p> <p>12 G. Bryant Buchner Date</p> <p>13 *If notary is required</p> <p>14 SUBSCRIBED AND SWORN TO BEFORE ME THIS</p> <p>15 _____ DAY OF _____, 20____.</p> <p>16</p> <p>17</p> <p>18 _____</p> <p>19 NOTARY PUBLIC</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>

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Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS

COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

Veritext Legal Solutions is committed to maintaining the confidentiality of client and witness information, in accordance with the regulations promulgated under the Health Insurance Portability and Accountability Act (HIPAA), as amended with respect to protected health information and the Gramm-Leach-Bliley Act, as amended, with respect to Personally Identifiable Information (PII). Physical transcripts and exhibits are managed under strict facility and personnel access controls. Electronic files of documents are stored in encrypted form and are transmitted in an encrypted

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